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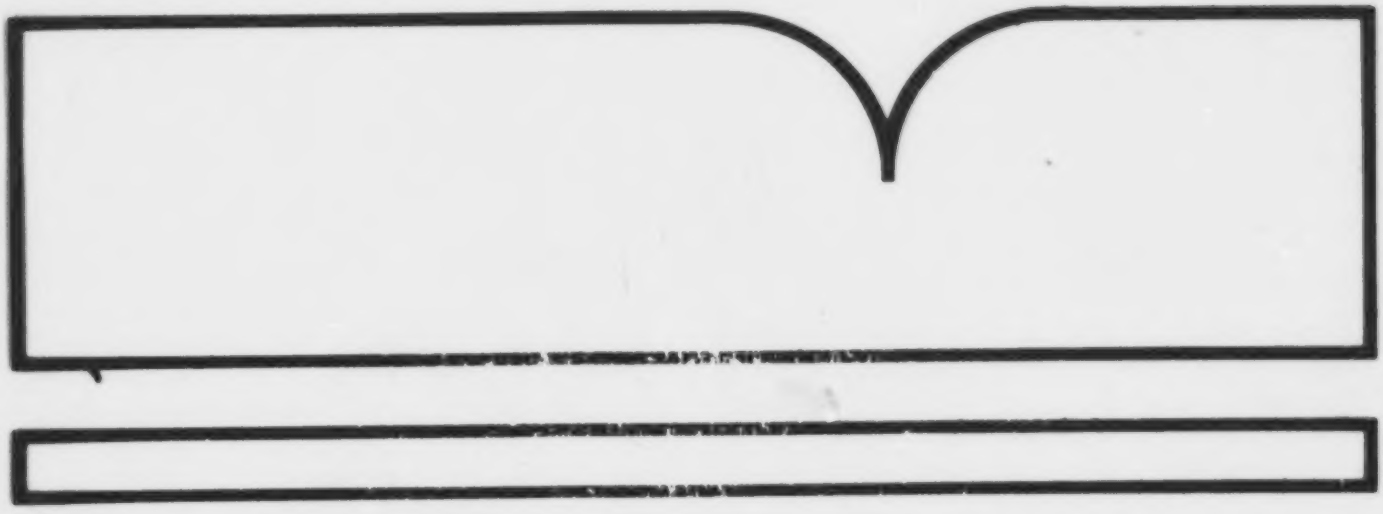
# Regulations and Non-Regulatory Revisions to State Implementation Plan: Utah

Atlantic Environmental Associates, Inc.
Waltham, MA

Prepared for

Environmental Protection Agency
Research Triangle Park, NC

Oct 81



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July 1981

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# Regulations and Non-Regulatory Revisions to State Implementation Plan: Utah

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EPA-450/2-81-064

# Regulations and Non-Regulatory Revisions to State Implementation Plan: Utah

By

Atlantic Environmental Associates, Inc.
59 Vernon Street
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Contract No. 68-02-3565

EPA Project Officer: Willis P. Beal

Prepared for

U.S ENVIRONMENTAL PROTECTION AGENCY
Control Programs Development Division
Office of Air Quality Planning and Standards
Research Triangle Park, North Carolina 27711

July 1981

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16. ABSTRACT

This document has been produced in compliance with Section 110(h) of the Clean Air Act, as amended in 1977, which mandates periodic publication of State Implementation Plan (SIP) requirements. The first section of the document comprises the Federally approved SIP regulations. It consists of the EPA-approved State and/or local air pollution control regulations cited by reference in the Federal Register; regulations promulgated as of August 1, 1981 have been included in this document.

The present compilation constitutes an update of a previous documentation of regulations as of July 1, 1979. State and/or local air quality regulations which have not been Federally approved as of August 1, 1981, are not included. However, any omissions of regulations from this document in no way affects the ability of the respective Federal, State, or local agencies to enforce such regulations. A summary sheet of the regulatory revisions is provided to give a quick historical assessment of the changes.

The second part of the document contains the text of non-regulatory SIP revisions approved by EPA up to August 1, 1981, excluding notices or certifications of public hearings and technical support data. A complete tabulation of these revisions is also provided.

17. KEY WORDS AND DOCUMENT ANALYSIS

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## PREFACE

This document has been produced in compliance with Section 110(h) of the Clean Air Act, as amended in 1977, which mandates periodic publication of State Implementation Plan (SIP) requirements. The first section of the document comprises the Federally approved SIP regulations. It consists of the EPA approved State and/or local air pollution control regulations cited by reference in the Federal Register; all regulations Federally promulgated as of August 1, 1981 have been included.

The present compilation constitutes an update of a previous documentation of regulations as of July 1, 1979.* State and/or local air quality regulations which have not been Federally approved as of August 1, 1981 are not included. However, any omissions of regulations from this document in no way affects the ability of the respective Federal, State or local agencies to enforce such regulations.

This document is not intended to provide a tool for determining the enforceability of any given regulation. Rather, it is intended to provide a comprehensive compilation of those regulations which are incorporated by reference into Title 40, Part 52, of the Code of Federal Regulations (CFR). The exclusion of a Federally approved regulation from this document does not diminish the enforceability of the regulation. Similarly, the inclusion of a given regulation in this document does not, in itself, render the regulation enforceable by either the State or EPA.

The regulations have been organized in this document according to the official State/local agency format. However, since State air quality regulations vary widely in their organization, content, and language, a standardized subject index has been added. The index listings consist of both pollutant and activity oriented categories to facilitate usage. For example, regulations which apply to copper smelters may be found under sulfur compounds (50.2), particulate matter process weight (50.1.1), or copper smelters (51.15). Federal regulations pertaining to a given State are not included herein but can be found under Title 40 Code of Federal Regulations, Part 52.

Additionally, a summary sheet of the regulatory revisions is included to provide a quick historical assessment of the changes. These summary sheets contain the date of submittal to EPA of each revision and the Federal Register publication date on which the revision was approved by EPA. A brief description of the regulation which was submitted is also included.

In accordance with the Act, the second part of the document contains non-regulatory SIP revisions approved by EPA up to August 1, 1981. All approved non-regulatory revisions listed under Identification of Plan in the CFR are included except notices or certifications of public hearings, and technical support data. Non-regulatory submittals which have only received EPA approval on selected elements are included in their entirety with an accompanying indication of the status of Federal actions on the non-approved elements. The non-regulatory revisions have been organized in this document

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* Regulations and Non-Regulatory Revisions to State Implementation Plan: Utah, EPA-450/2-80-051, prepared under Contract 68-02-3388, July 31, 1980.

according to the date of publication of EPA approval in the Federal Register. For historical completeness, a complete tabulation of these revisions is provided at the beginning of this second section.

SUMMARY OF
EPA-APPROVED REGULATORY REVISIONS TO STATE OF UTAH SIP
BETWEEN JULY 1, 1979 AND JULY 31, 1981

| Publication of Approval | Submittal Date | Page | Document Description |
|---|---|---|---|
| 02/19/80 | 12/28/78 | 45FR10765 | Regulation revisions to Parts III and IV. (Note: Specifically disapproved: TSP regulations, particulate emissions 3.2.1, $SO_2$ regulation.) |
| 05/05/81 | 08/11/80 | 46FR25092 | Regulation revisions to Parts I and IV. |

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UTAH STATE DIVISION OF HEALTH

AIR CONSERVATION REGULATIONS

FOREWARD

The Air Conservation Act and these Air Conservation Regulations constitute the legal bases for control of air pollution sources in the State of Utah. These Regulations have been adopted by the Utah Air Conservation Committee and the Utah State Board of Health under authority of Section 26-24-5 and 26-15-5, Utah Code Annotated, 1953, as amended.

These Regulations apply and will be enforced throughout the State of Utah, whether adopted by local governments or not. They are recommended for adoption in local jurisdictions where environmental specialists are available to cooperate in implementing Regulation requirements.

These Regulations are designed to facilitate addition of new sections as they are adopted. It is recognized that rapid growth of technical and scientific knowledge coupled with knowledge acquired by experience will necessitate revision of these Regulations from time to time.

Federal ambient and new source standards apply throughout the Nation and are legally enforceable in Utah. Therefore, a summary of the Federal standards* is included in Appendix A for convenience of reference.

The Committee and Board have interpreted their duties, as assigned by Legislative Act, in the following language:

"..... (1) to determine the kinds and concentrations of pollutants in the air, (2) to control the release of air pollutants to achieve a quality of air that is not harmful to man, animals, or vegetation, or which creates property damage, (3) to control man-caused air contamination which aggravates the visibility problem to which Utah is periodically subjected due to natural meteorological phenomena, (4) whenever economically feasible, to reduce or eliminate the production of pollutants which are a nuisance though not harmful to man, animals or vegetation, (5) to establish an alert system enforcing curtailment of activities of major pollution sources that are not amenable to permanent control."

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* The Utah Air Conservation Committee and the State Board of Health do not necessarily agree with most of the specific limits selected for ambient standards by the Federal Government. (Reference March 17, 1971 letter from the Executive Secretary Utah Air Conservation Committee to Mr. William D. Ruckelshaus, Administrator, Environmental Protection Agency.)

The Committee has adopted the following air quality monitoring policy:

Determining ambient air pollutant concentrations is, at best, a complex operation if meaningful and useful data are to be obtained. In mountainous terrain. characteristic of most of Utah, the difficulties are particularly severe because micrometeorological variables are superimposed upon the macrometeorological situation and frequently predominate. Under these circumstances a valid monitoring program for the State must be developed on at least one unchanging base-line for reference, consisting of a network of permanently located stations at strategic sites. On this premise, it is concluded that the State monitoring system shall include an appropriate number of permanent stations capable of continuously monitoring all of the pollutants of interest, augumented with semi-permanent stations of a number and capability to assess air quality in any location deemed necessary.

UTAH STATE DEPARTMENT OF HEALTH

AIR CONSERVATION REGULATIONS

PART I

DEFINITIONS*

1.1.1 Abrasive Blasting means the operation of cleaning or preparing a surface by forcibly propelling a stream of abrasive material against the surface.

1.1.2 Abrasive Blasting Equipment means any equipment utilized in abrasive blasting operations.

1.1.3 Abrasives means any material used in abrasive blasting operations including but not limited to sand, slag, steel shot, garnet or walnut shells.

1.1.4 Accumulator means the reservoir of a condensing unit receiving the condensate from the condenser.

1.1.5 Actual Area of Nonattainment means an area which is shown by monitored data or modeling actually to exceed the National Ambient Air Quality Standards (Boundaries are established in the Utah State Implementation Plan).

1.1.6 Air Contaminant means any particulate matter or any gas, vapor, suspended solid or any combination thereof, excluding steam and water vapors (Section 26-24-2(1) Utah Code Annotated, 1953, as amended).

1.1.7 Air Contaminant Source means any and all sources of emission of air contaminants whether privately or publicly owned or operated (Section 26-24-2(2) UCA, 1953, as amended).

1.1.8 Air Dried Coating means coatings which are dried by the use of air or a forced air dryer.

1.1.9 Air Pollution means the presence in the ambient air of one or more air contaminants in such quantities and duration and under conditions and circumstances, as is or tends to be injurious to human health or welfare, animal or plant life or property, as determined by the standards, rules and regulations adopted by the Air Conservation Committee (Section 26-24-2(3) UCA, 1953, as amended).

1.1.10 Ambient Air means the surrounding or outside air (Section 26-24-2(4), UCA, 1953, as amended).

* The definitions contained in Part I are not applicable to Part VII which includes Rules and Regulations relating to the Utah Indoor Clean Air Act.

1.1.11 Application Area means the area where the coating is applied by spraying, dipping, or flow coating techniques.

1.1.12 Appropriate Authority means the governing body of any city, town or country.

1.1.13 Asphalt means the dark brown to black cementitious material (solid, semisolid, or liquid in consistency) of which the main constituents are bitumens which occur naturally or as a residue of petroleum refining.

1.1.14 Atmosphere means the air that envelops or surrounds the earth and includes all space outside of buildings, stacks or exterior ducts.

1.1.15 Authorized Local Authority means a city, county, city-county or district health department; a city, county or combination fire department; or other local agency duly designated by appropriate authority, with approval of the State Department of Health and other lawfully adopted ordinances, codes or regulations not in conflict therewith.

1.1.16 Average Monthly Storage Temperature means the average daily storage temperature measured over a period of one month.

1.1.17 Batch Open Top Vapor Degreasing means the batch process of cleaning and removing grease and soils from metal surfaces by condensing hot solvent vapor on the colder metal parts.

1.1.18 Best Available Control Technology (BACT) means an emission limitation, based on the maximum degree or reduction of each pollutant subject to regulation under the Clean Air Act and/or the Utah Air Conservation Act emitted from or which results from any emitting installation, which the Air Conservation Committee, on a case-by-case basis taking into account energy, environmental and economic impacts and other costs, determines is achieveable for such installation through application of production processes and available methods, systems and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of each such pollutant. In no event shall applications of BACT result in emissions of any pollutants which will exceed the emissions allowed by Section 111 or 112 of the Clean Air Act.

1.1.19 Board means the Utah State Board of Health.

1.1.20 Bottom Filling means the filling of a tank through an inlet at or near the bottom of the tank designed to have the opening covered by the liquid after the pipe normally used to withdraw liquid can no longer withdraw any liquid.

1.1.21 Breakdown means any malfunction or procedural error which will result in the inoperability of the control equipment or process equipment causing excess air pollution emissions for any period longer than 3 hours.

1.1.22 BTU means British Thermal Unit, the quantity of heat necessary to raise the temperature of one pound of water one degree Farenheit.

1.1.23 Calibration Drift means the change in the instrument meter readout over a stated period of time of normal continuous operation when the VOC concentration at the time of measurement is the same known upscale value.

1.1.25 Class II Hard Board Paneling Finish means finishes which meet the specifications of voluntary product standards PS-59-73 as approved by the American National Standards Institute.

1.1.24 Clean Air Act means Federal Clean Air Act as amended in 1977.

1.1.26 Clear Coat means a coating which lacks color and opacity.

1.1.27 Clearing Index means an indicator of the predicted rate of clearance of ground level pollutants from a given area. This number is calculated by the National Weather Service from daily measurements of temperature lapse rates and wind speeds from ground level to 10,000 feet (see Apendix D for further details).

1.1.28 Coating Application System means all operations and equipment which applies, conveys, and dries a surface coating, including, but not limited to, spray booths, flow coaters, flash off areas, air dryers and ovens.

1.1.29 Cold Cleaning means the batch process of cleaning and removing soils from metal surfaces by spraying, brushing, flushing or immersing while maintaining the solvent below its boiling point.

1.1.30 Committee means Utah Air Conservation Committee.*

1.1.31 Compliance Schedule means a schedule of events, by date, which will result in compliance with these regulations.

1.1.32 Condensor means any device which cools a gas stream to a temperature which removes specific organic compounds by condensation.

1.1.33 Confined Blasting means any abrasive blasting conducted in an enclosure which significantly restricts air contaminants from being emitted to the ambient atmosphere, including but not limited to shrouds, tanks, drydocks, buildings and structures.

1.1.34 Control System means any number of control devices, including condensors, which are designed and operated to reduce the quantity of VOC emitted to the atmosphere.

1.1.35 Conveyorized Degreasing means the continuous process of cleaning and removing greases and soils from metal surfaces by using either cold or vaporized solvents.

* See Section 26-24-2, UCA, 1953, as amended.

1.1.36 Curtain Coating means the application of a coating material to a wood substrate by means of a free-falling film of coating.

1.1.37 Cutback Asphalt means any asphalt which has been liquified by blending with petroleum solvents (diluents) or, in the case of some slow cure asphalts (road oils), which have been produced directly from the distillation of petroleum.

1.1.38 Department means Utah State Department of Health.*

1.1.39 Director means the Director of the Utah State Department of Health.*

1.1.40 Emission means the act of discharge into the atmosphere of an air contaminant or an effluent which contains or may contain an air contaminant; or the effluent so discharged into the atmosphere.

1.1.41 Emission Limitation means a requirement established by the Committee or the Administrator, EPA, which limits the quantity, rate or concentration of emission of air pollutants on a continuous emission reduction including any requirement relating to the operation or maintenance of a source to assure continuous emission reduction (Section 302(k), Clean Air Act).

1.1.42 EPA means Environmental Protection Agency.

1.1.43 Executive Secretary means the Executive Secretary of the Committee.

1.1.44 Existing Installation means an installation, construction of which began prior to the effective date of any regulation having application to it.

1.1.45 Extreme Performance Coatings means coatings designed for harsh exposure or extreme environmental conditions.

1.1.46 Fabric Coating means the coating of a textile substrate with a knife, roll or rotogravure coater to impart characteristics that are not initially present, such as strength, stability, water or acid repellancy, or appearance.

1.1.47 Facility means machinery, equipment, structures of any part or accessories thereof, installed or acquired for the primary purpose of controlling or disposing of air pollution. It does not include an air conditioner, fan or other similar device for the comfort of personnel.

1.1.48 Flat Wood Coating means the surface coating of any flatwood products.

* See Section 26-24-2, UCA, 1953, as amended.

1.1.49 Flexographic Printing means the application of works, designs, and pictures to substrate by means of a roll printing technique in which the pattern to be applied is raised above the printing roll and the image carrier is made of rubber or other elastomeric materials.

1.1.50 Freeboard Ratio means the freeboard height divided by the width of the degreaser.

1.1.51 Fugitive Dust means particulate, composed of soil and/or industrial particulates such as ash, coal, minerals, etc., which becomes airborne because of wind or mechanical disturbance of surfaces. Natural sources of dust and fugitive emissions are not fugitive dust within the meaning of this definition.

1.1.52 Fugitive Emissions means emissions from an installation or facility which are neither passed through an air cleaning device nor vented through a stack.

1.1.53 Garbage means all putrescible animal and vegetable matter resulting from the handling, preparation, cooking and consumption of food, including wastes attendant thereto.

1.1.54 Gasoline means any petroleum distillate, used as a fuel for internal combustion engines, having a Reid vapor pressure of 4 pounds or greater.

1.1.55 Hardwood Plywood means plywood whose surface layer is a veneer of hardwood.

1.1.56 Heavy Fuel Oil means a petroleum product or similar material with a boiling range higher than that of diesel fuel.

1.1.57 Hot Well means the reservoir of a condensing unit receiving the warm condensate consisting primarily of water from the condenser.

1.1.58 Household Waste means any solid or liquid material normally generated by the family in a residence in the course of ordinary day-to-day living, including but not limited to garbage, paper products, rags, leaves and garden trash.

1.1.59 Hydroblasting means any abrasive blasting using high pressure liquid as the propelling force.

1.1.60 Indirect Source means a building, structure or installation which attracts or may attract mobile source activity that results in emission of a pollutant for which there is a national standard.*

1.1.61 Installation means a discrete process with identifiable emissions which may be part of a larger industrial plant. Pollution equipment shall not be considered a separate installation or installations.

1.1.62 Knife Coating means the application of a coating material to a substrate by means of drawing the substrate beneath a blade that spreads the coating evenly over the width of the substrate.

1.1.63 Large Appliances means doors, cases, lids, panels, and interior support parts of residential and commercial washers, dryers, ranges, refrigerators, freezers, water heaters, dishwashers, trash compactors, air conditioners, and other similar products.

1.1.64 Lowest Achieveable Emission Rate (LAER), as defined in Section 173(2), Clean Air Act, means for any source, that rate of emissions which reflects:

a. The most stringent emission limitation which is contained in the implementation plan of any state for such class or category of source, unless the owner or operator of the proposed source demonstrates that such limitations are not achieveable, or

b. The most stringent emission limitation which is achieved in practice by such class or category of source, whichever is more stringent.

In no event shall the application of this term permit a proposed new source to emit any pollutant in excess of the amount allowable under applicable new source standards of performance.

1.1.65 LPG means liquified petroleum gas such as propane or butane.

1.1.66 Magnet Wire Coating means the process of applying coating of electrical insulating varnish or enamel to aluminum or copper wire for use in electrical machinery.

1.1.67 Major Modification (for the purpose of Section 3) means any planned change in a major source which results in a potential emission increase determined by the Executive Secretary not to be de minimus in nature or extent.

1.1.68 Major Source means any stationary source of air pollutants which directly emits or has the potential to emit, one hundred tons or more per year of any air pollutant.

1.1.69 Metal Furniture Coating means the surface coating of any furniture made of metal or any metal part which will be assembled with other metal, wood fabric, plastic, or glass parts to form a furniture piece.

1.1.70 Modification means any planned change in a source which results in a potential increase of emission.

1.1.71 Multiple Nozzles means a group of two or more nozzles being used for abrasive cleaning of the same surface in such close proximity that their separate plumes are indistinguishable.

1.1.72 National Ambient Air Quality Standards (NAAQS) means the allowable concentrations of air pollutants in the ambient air specified by the Federal Government (Title 40, Code of Federal Regulations, Part 50).

1.1.73 Natural Finish Hardwood Plywood Panels means panels whose original grain pattern is enhanced by essentially transparent finishes frequently supplemented by fillers and toners.

1.1.74 New Installation means an installation, construction of which began after the effective date of any regulation having application to it.

1.1.75 Nonattainment Area means for any pollutant, "an area which is shown by monitored data or which is calculated by air quality modeling (or other methods determined by the Administrator, EPA to be reliable) to exceed any National Ambient Air Quality Standard for such pollutant" (Section 171, Clean Air Act). Such term includes any area designated as nonattainment under Section 107, Clean Air Act.

1.1.76 Offset means an amount of emission reduction, by a source, greater than the emission limitation imposed on such source by these regulations and/or the State Implementation Plan.

1.1.77 Opacity means the capacity to obstruct the transmission of light, expressed as percent.

1.1.78 Open Burning means any burning of combustible materials resulting in emission of products of combustion into ambient air without passage through a chimney or stack.

1.1.79 Packaging Rotogravure Printing means rotogravure printing upon paper, paper board, metal foil, plastic film, and other substrates, which are, in subsequent operations, formed into packaging products and labels.

1.1.80 Paper Coating means coatings put on paper and pressure sensitive tapes regardless of substrate. Related web coating processes on plastic film and decorative coatings on metal foil are included in this definition.

1.1.81 Particle Board means a manufactured board made of individual particles which have been coated with a binder and formed into flat sheets by pressure.

1.1.82 Penetrating Prime Coat means an application of low-viscosity liquid asphalt to an absorbent surface in order to prepare it for paving with asphaltic concrete.

1.1.83 Person means any individual, public or private corporation, partnership, association, firm, trust, estate, the State or any department, institution, bureau or agency thereof, any municipal corporation, county, city, or other political subdivision of the state, or any other legal entity whatsoever which is recognized by the law as being subject to rights and duties (Section 26-24-2(5) UCA, 1953, as amended).

1.1.84 Petroleum Refinery Complex means any source or installation engaged in producing gasoline, aeromatics, kerosene, distillate fuel oils, residual fuel oils, lubricants, asphalt, or other products through distillation of petroleum or through redistillation, cracking rearrangement or reforming of unfinished petroleum derivatives.

1.1.85 Pressure Head Coating means the application of a coating material to a wood substrate by means of a pressure head coater where coating material is metered into a pressure head and forced through a calibrated slit between two knives.

1.1.86 Process Drain means any drain used in a refinery complex on equipment which processes, transfers a volatile organic compound or mixture of volatile organic compounds.

1.1.87 Process Unit Turnaround means the procedure of shutting a refinery unit down after a run to do necessary maintenance and repair work and putting the unit back in operation.

1.1.88 Production Equipment Exhaust System means a device for collecting and directing out of the work area VOC fugitive emissions from reactor openings, centrifuge openings, and other vessel openings for the purpose of protecting employees from excessive VOC exposure.

1.1.89 Publication of Rotogravure Printing means rotogravure printing upon paper which is subsequently formed into books, magazines, catalogues, brochures, directories, newspaper supplements, and other types of printed materials.

1.1.90 Reactor means any vat or vessel, which may be jacketed to permit temperature control, designed to contain chemical reactions.

1.1.91 Refuse means solid wastes, such as garbage and trash.

1.1.92 Roll Coating means the application of a coating material to a substrate by means of hard rubber or steel rolls.

1.1.93 Roll Printing means the application of words, designs and pictures to a substrate usually by means of a series of hard rubber or steel rolls each with only partial coverage.

1.1.94 Rotogravure Coating means the application of a coating material to substrate by means of a roll coating technique in which the pattern to be applied is etched on the coating roll. The coating material is picked up in these recessed areas and is transferred to the substrate.

1.1.95 Rotogravure Printing means the application of words, designs, and pictures to a substrate by means of a roll printing technique which involves a recessed image area in the form of cells.

1.1.96 Salvage Operation means any business, trade or industry engaged in whole or in part in salvaging or reclaiming any product or material, including but not limited to metals, chemicals, shipping containers or drums.

1.1.97 Separation Operation means any process that separates a mixture of compounds and solvents into two or more components. Specific mechanisms include extraction, centrifugation, filtration, and crystallization.

1.1.98 Single Coat means a single film of coating applied directly to the metal substrate omitting the primer application.

1.1.99 Source means any structure, building, facility, equipment, installation or operation (or combination thereof) which emits or may emit any air pollutant and which is located on one or more continuous or adjacent properties and which is owned by the same person (or persons under common contract).

1.1.100 Standards of Performance for New Stationary Sources means the Federally established requirements for performance and record keeping (Title 40 Code of Federal Regulations, Part 60).

1.1.101 State means Utah State.

1.1.102 Submerged Fill Pipe means any fill pipe with a discharge opening which is entirely submerged when the liquid level is 6 inches above the bottom of the tank.

1.1.103 Synthesized Pharmaceutical Manufacturing means the manufacture of pharmaceutical products by chemical synthesis.

1.1.104 Tile Board means paneling that has a colored waterproof surface coating.

1.1.105 Total Suspended Particulate (TSP) means minute separate particles of matter, collected by high volume sampler.

1.1.106 Trash means solids not considered to be highly flammable or explosive including, but not limited to clothing, rags, leather, plastic, rubber, floor coverings, excelsior, tree leaves, yard trimmings and other similar materials.

1.1.107 Unconfined Blasting means any abrasive blasting which does not conform with definition 1.1.25.

1.1.108 Vacuum Producing System means any reciprocating, rotary, or centrifugal blower or compressor, or any jet ejector or device that takes suction from a pressure below atmospheric and discharges against atmospheric pressure.

1.1.109 Vinyl Coating means applying a decorative or protective top coat, or printing on vinyl coated fabric or vinyl sheets.

1.1.110 Volatile Organic Compound (VOC) means any compound of carbon that has a vapor pressure greater than 0.1 mm of Hg at standard conditions (temperature 20°C, pressure 760 mm of Hg. Excluded from the category of Volatile Organic Compound are carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonates.

1.1.111 Waste means all solid, liquid or gaseous material, including, but not limited to, garbage, trash, household refuse, construction or demolition debris, or other refuse including that resulting from the prosecution of any business, trade or industry.

1.1.112 Waxy, Heavy Pour Crude Oil means a crude oil with a pour point of 50°F or higher as determined by the American Society for Testing and Materials Standard D97-66, "Test for pourpoint of petroleum oils."

1.1.113 Wet Abrasive Blasting means any abrasive blasting using compressed air as the propelling force and sufficient water to minimize the plume.

1.1.114 Zero Drift means the change in the instrument meter readout over a stated period of time of normal continuous operation when the VOC concentration at the time of measurement is zero.

UTAH STATE DIVISION OF HEALTH

AIR CONSERVATION REGULATIONS

PART II

GENERAL REQUIREMENTS

2.1 Air Pollution Prohibited Emission of air contaminants in sufficient quantities to cause air pollution as defined in paragraph 1.1.9 is prohibited.*

2.2 Periodic Reports of Emissions - Availability of the Information The owner or operator of any stationary air-contaminant source in Utah shall furnish to the Committee the periodic reports required under Subsection 26-24-5 (3) Utah Code Annotated, 1953, as amended, and any other information as the Committee may deem necessary to determine whether the source is in compliance with Utah and federal regulations and standards. The information thus obtained will be correlated with applicable emission standards or limitations and will be available to the public during normal business hours at the appropriate office of the Division.

2.3 Variances Authorized

2.3.1 Variance from these regulations may be granted by the Committee as provided by law (See Section 26-24-11 (5), UCA, 1953, as amended).

a. To permit continued operation of an air pollution source for the time period involved in installing or constructing air pollution control equipment in accordance with a compliance schedule negotiated by the Executive Secretary and approved by the Committee.

b. To permit continued operation of an air pollution source where there is no practicable means known or available for adequate prevention, abatement, or control of the air pollutants involved. Such a variance shall be only until the necessary means for prevention, abatement, or control become known and available, subject to the use of substitute or alternate measures the Committee may prescribe.

c. To permit continued operation of an air pollution source where the control measures, because of their extent or cost, must be spread over a considerable period of time.

2.3.2 Variance requests may be submitted by the owner or operator who is in control of any plant, building, structure, establishment, process or equipment.

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* The State Statute provides for penalties up to $50,000/day for violation of State Statutes, Regulations, Rules or standards. (See Section 26-24-13, UCA, 1953, as amended, for further details.)

2.4 Open Burning. (Original Effective date 3/5/69)

2.4.1 Community Waste Disposal - no open burning shall be done at sites used for disposal of community trash, garbage and other wastes except as authorized through a variance or as authorized for a specific period of time by the Air Conservation Committee on the basis of justifiable circumstances reviewed and weighed in terms of pollution effects and other relevant considerations at appropriate hearing following written application.

2.4.2 General Prohibitions - no person shall burn any trash, garbage or other wastes, nor shall conduct any salvage operation by open burning except in conformity with the provisions of Sections 2.1.3 and 2.1.4 below.

2.4.3 Permissible Burning - Without Permit - when not prohibited by other laws or by other officials having jurisdiction and provided that a nuisance is not created, the following types of open burning are permissible without the necessity of securing a permit.

a. In devices for the primary purpose of preparing food such as outdoor grills and fireplaces.

b. Camp fires and fires used solely for recreational purposes where such fires are under control of a responsible person.

c. Indoor fireplaces.

d. Properly operated industrial flares for combustion of flammable gases.

e. Burning, on the premises, of combustible household wastes generated by occupants of dewllings of four family units or less in those areas only where no public or duly licensed disposal service is available.

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* Sections 1.3 and 1.7 may require more stringent controls than listed herein; in any event the requirements of Sections 1.3 and 1.7 must be met.

2.4.4 Permissible Burning - With Permit - Exemptions - when not prohibited by other laws or other officials having jurisdiction and when a nuisance is not created, the types of open burning listed as a, b, c, and d, below, are permissible; (1) under the terms of individual permits issued by authorized local authority under a "clearing index" system approved and coordinated by the Utah State Division of Health, or (2) when specifically exempted by the Air Conservation Committee, following written application and appropriate hearing. Application under (2) may be made by a political subdivision of the State as well as by an individual citizen.

a. Open burning of tree cuttings and slash in forest areas where the cuttings accrue from pulping, lumbering and similar operations, but excluding waste from sawmill operations such as sawdust and scrap lumber.

b. Open burning of trees and brush within railroad and public road rights-of-way provided that dirt is removed from stumps before burning, and that tires, oil more dense than #2 fuel oil or other materials which can cause severe air pollution are not used to start fires or keep fires burning.

c. Open burning of solid or liquid fuels or structures for removal of hazards or eyesores or for fireman training purposes when conducted under the direct control and supervision of organized fire departments.

d. Open burning, in remote areas, of highly explosive or other hazardous materials, for which there is no other known practical method of disposal.

2.4.5 Special Conditions Open burning for special purposes, or under unusual or emergency circumstances, may be approved by the executive secretary.

UTAH STATE DIVISION OF HEALTH

AIR CONSERVATION REGULATIONS

PART III

CONTROL OF INSTALLATIONS

3.1 Notice of Intent and Approval Order.

3.1.1 Except for the exemptions listed herein, any person planning to construct a new installation which will or might reasonably be expected to become a source or an indirect source of air pollution or to make modifications or relocate an existing installation which will or might reasonably be expected to increase the amount or change the effect of, or the character of, air contaminants discharged, so that such installation may be expected to become a source of air pollution, or any person planning to install an air cleaning device or other equipment intended to control emission of air contaminants from a stationary source, shall submit to the executive secretary a notice of intent prior to initiation of construction, modification or relocation. The notice of intent shall include plans, specifications and such other information as is necessary to determine whether the proposed construction, installation, modification, relocation or establishment will be in accord with applicable requirements of these Regulations. The executive secretary may require the submission of additional information as he deems necessary to review the proposal.

3.1.2 Within 90 days of receipt of all plans, specifications and other information required under this Section 3.1, the executive secretary shall issue an order prohibiting the proposed construction, installation, modification, relocation or establishment if he deems any part of it inadequate to meet the applicable requirements of these Regulations. If more time is needed to review the proposal it shall not exceed three 30-day extensions.

3.1.3 Prior to issuing an approval or disapproval order, the executive secretary will advertise his intent to approve or disapprove in a newspaper of general circulation in the locality of the proposed construction, installation, modification, relocation or establishment. At least one location will be provided where the information submitted by the owner or operator and the State's anaylses of the proposal will be available for public inspection. A 30-day period will be allowed for submission of public comment. If requested within 15 days of publication of notice, a hearing will be held in the area of the proposed construction, installation, modification, relocation or establishment. Any comments or statements received will be considered before an order is issued. The public comment and hearing procedure will not be required when an order is issued for the purpose of extending the time to review plans and specifications.

3.1.4 Whenever the executive secretary determines that the plans, specifications and other information submitted, with such revisions as he may require, are in accord with applicable requirements, he shall issue an order permitting the proposed construction, installation, modification, relocation or establishment, with the further stipulation that all required facilities be adequately and properly maintained. To accomodate stage construction of a large source, he may issue an order authorizing construction of an initial stage prior to receipt of detailed plans for the entire proposal provided he is satisfied through a review of general

plans, engineering reports and other information that the proposal is feasible under the intent of these Regulations. Subsequent detailed plans will then be processed as prescribed in this section.

3.1.5 Approval orders issued by the executive secretary in accordance with the provisions of Section 3.1 of these Regulations shall be reviewed eighteen months after the date of issue to determine the status of construction, installation, modification, relocation or establishment. If a continuous program of construction, installation, modification, relocation or establishment is not proceeding, the executive secretary may revoke the approval order.

3.1.6 The following information, where applicable, should be submitted with the notice of intent:

a. A description of the nature of the process (es) involved; the nature, procedures for handling and the quantities of raw materials; the type and quantity of fuels employed; and the nature and quantity of finished product.

b. Expected composition and physical characteristics of effluent stream both before and after treatment by an air cleaning device, including emission rates, volume, temperature and concentration of air contaminants.

c. Size, type and performance characteristics of air cleaning devices.

d. Location and elevation of the emission point and other factors relating to dispersion and diffusion of the air contaminant in relation to the emission to nearby structures and window openings, and other information necessary to appraise the possible effects of the effluent.

e. The location of planned sampling points and the tests of the completed installation to be made by the owner when necessary to ascertain compliance.

f. Any plans, specifications and related information which are in final form at the time of submission of notice of intent.

3.1.7 The following are exempt from the notice of intent requirement:

a. Fuel-burning equipment using no other fuel than natural gas, or LPG or other mixed gas distributed by a utility in accordance with the rules of the Public Service Commission of the State of Utah, unless there are emissions other than combustion gases.

b. Comfort heating equipment, boilers, water heaters, air heaters and steam generators with a rated capacity of less than one million BTU per hour if fueled by oil.

c. Emergency heating equipment, using coal or wood for fuel, with a rated capacity less than 50,000 BTU per hour.

d. Exhaust systems for controlling steam and heat that do not contain combustion products.

e. New parking areas of less than 600 vehicles capacity or modified parking areas increasing capacity by less than 350 vehicles.

3.1.8 The executive secretary shall issue an approval order if he determines through plan review that:

a. The degree of pollution control for emissions, to include fugitive emissions and fugitive dust, is at least best available control technology except as otherwise provided in these Regulations, and

b. The proposed installation will be in accord with applicable requirements of: Utah Air Conservation Regulations; National Standards of Performance for New Stationary Sources; National Primary and Secondary Ambient Air Quality Standards; National Emission Standards for Hazardous Air Pollutants; new source review criteria; maximum allowable increase and maximum allowable concentration requirements for Prevention of Significant Deterioration; the non-attainment plan for the area, if the area is classified as a non-attainment area; and new source requirements for non-attainment areas under the Federal Clean Air Act.

3.1.9 The owner or operator of a source previously approved under this paragraph who intends to temporarily relocate the source (not to exceed 180 consecutive days) shall submit a notice of intent to relocate but is not required to submit additional plans and specifications nor is the executive secretary required to submit the proposal for public comment prior to approval or disapproval.

3.2 Non-Attainment Area Requirements - Existing Sources

3.2.2 Compliance Schedule. The owner or operator of an existing installation which is a source of a pollutant in a non-attainment area for the pollutant, or which has significant impact upon a non-attainment area, is required to achieve the established emission limitation as expeditiously as practicable but no later than December 31, 1982 or such later date as may be specified by Congress or EPA under the Clean Air Act. Within 180 days after the effective date of a regulation establishing a standard of pollutant control pursuant to an emission limitation under Section 3.2.1 or 4.1.1, the owner or operator of an existing installation not meeting these requirements must submit a notice of intent as outlined in Section 3.1 together with a compliance schedule. The compliance schedule shall contain proposed interim measures to control and identify the degree of emission reduction to be achieved by each such interim measure of control.

3.3 Non-Attainment Area Requirements - New Sources.

3.3.1 Emission Limitations. Any source constructed in an actual area of non-attainment or in an area which will impact on an actual area of non-attainment must meet all applicable emission requirements of these Air Conservation Regulations and the Utah State Implementation Plan. A proposed source which is not a major source may be approved without further analysis provided such source meets all such applicable emission limitations. The emission limitations shall be stated as a condition of the approval order.

3.3.2 Review of Major Sources of Air Quality Impact. Every major new source or major modification must be reviewed by the executive secretary to determine if a source will cause or contribute to a violation of the NAAQS. The determination of whether a source will cause or contribute to a violation of the NAAQS will be made by the executive secretary as of the new source's projected start-up date. He will make an analysis of the proposed new source's operation data using best information and analytical techniques available.

a. If the owner or operator of a source proposes to locate the source in an area where the source will not cause an increase greater than the following increments in actual areas of non-attainment, and the source otherwise meets the requirements of these regulations, such source shall be approved.

| | AVERAGING TIME | | | | |
|---|---|---|---|---|---|
| Pollutant | Annual | 24-Hour | 8-Hour | 3-Hour | 1-Hour |
| $SO_2$ | 1.0 $\mu g/m^3$ | 5 $\mu g/m^3$ | | 25 $\mu g/m^3$ | |
| TSP | 1.0 $\mu g/m^3$ | 5 $\mu g/m^3$ | | | |
| CO | | | 0.5 $mg/m^3$ | | 2 $mg/m^3$ |

b. If the executive secretary finds that the emissions from a proposed source would cause a new violation of the NAAQS but would not contribute to an existing violation, the executive secretary shall approve the proposed source if and only if:

(1) the new source is required to meet a more stringent emission limitation, sufficient to avoid a new violation of the NAAQS and/or

(2) the new source has acquired sufficient offset to avoid a new violation of the NAAQS and

(3) the new emission limitations for the proposed source and for any affected existing sources are enforceable.

c. If the executive secretary finds that the emissions from a proposed source would contribute to an existing violation of a national ambient air quality standard at the time of the source's proposed start-up date, approval shall be granted if and only if:

(1) the new source meets an emission limitation which is the lowest achievable emission rate for such source and

(2) the applicant has certified that all existing major sources in the State, owned or controlled by the owner or operator (or by any entity controlling, controlled by or under common control with such owner or operator) of the proposed source, are in compliance with all applicable Utah Air Conservation Regulations and Utah Implementation Plan requirements or are in compliance with an approved schedule and time table for compliance under the Utah Implementation Plan, the Utah Regulations, or an enforcement order, and that the source is complying with all requirements and limitations as expeditiously as practicable.

(3) emission offsets for the same pollutant from existing sources in the area of the proposed source (whether or not under the same ownership) are sufficient such that there will be reasonable progress toward attainment of the applicable NAAQS.

(4) the emission offsets provide a positive net air quality benefit in the affected actual area of non-attainment.

(5) there is an approved implementation plan in effect for the pollutant to be emitted by the proposed source.

d. Sources locating outside an actual area of non-attainment which cause the significant increments in paragraph 3.3.2.a to be exceeded in any actual area of non-attainment are subject to the requirements of paragraph 3.3.2.c but are exempted from paragraph 3.3.2.c.(3).

3.3.3 Construction in Stages. When a source is constructed or modified in stages which individually do not have the potential to emit more than 100 tons per year, the allowable emission from all such stages shall be added together in determining the applicablity of paragraph 3.3 of these Regulations.

3.3.4 Baseline for Determining Credit for Emission and Air Quality Offsets.

The baseline to be used for determination of credit for emission and air quality offsets will be the emission limitations and/or other requirements in the State Implementation Plan (SIP) revised in accordance with the Clean Air Act or subse-

quent revisions thereto in effect at the time the application to construct or modify a source is filed.

3.3.5 Banking of Emission Offset Credit. Banking of emission offset credit will be permitted to the fullest extent allowed by applicable Federal Law. To preserve banked emission reductions, the executive secretary must identify them in either the Utah SIP or an order and shall provide a registry to identify the person, private entity or governmental authority that has the right to use or allocate the banked emission reductions, and to record any transfers of, or liens on these rights.

3.3.6 Exemptions and Waivers. Exemptions and waivers from the requirements of this paragraph 3.3 may be made by the Committee to the extent permitted under Federal Law.

3.4 Emission Testing.

3.4.1 Emission testing will be required of all sources at least once every five years. Sources approved in accordance with Section 3.1 will be tested within six months of start-up. Sources for which emission limitations are established pursuant to Section 3.2.1 which do not require modification will be tested within one year of the effective date of these Regulations. In addition, if the executive secretary has reason to believe that an applicable emission limitation is being exceeded (i.e., through visible emission observations and monitoring data, etc.) he may require the owner or operator to perform such emission testing as is necessary to determine actual compliance status. The Committee may grant exceptions to the mandatory testing requirements of this paragraph 3.4.1 which are not inconsistent with the purposes of these Regulations.

3.4.2 At least 30 days, prior to conducting any emission testing required under any part of these Regulations, the owner or operator shall notify the executive secretary of the date, time and place of such testing and, if determined necessary by the executive secretary, the owner or operator shall attend a pre-test conference.

3.5 Emissions Inventory. The owner or operator of a stationary source of air pollution which emits 25 tons per year or more of air contaminant must submit a report of emissions to the executive secretary at least annually. Emission inventory reports shall include the rate and period of emission, specific plant source of air pollution, composition of air contaminent, type and efficiency of air pollution control equipment and other information necessary to quantify operation, pollution emission and evaluate pollution control.

UTAH STATE DIVISION OF HEALTH

AIR CONSERVATION REGULATIONS

PART IV

EMISSIONS STANDARDS*

4.1 Visible Emissions. This Section 4.1 shall not apply to stationary sources which have been assigned a gravimetric emission limitation or an equipment operating requirement in accordance with Section 3.2 of these Regulations.

4.1.1 In actual areas on non-attainment for particulates, visible emissions from existing installations excepting gasoline powered internal combustion engines, shall be of a shade or density no darker than 20% opacity. Existing installations in other areas of the State which have no other assigned emissions limitation under the SIP, except incinerators and internal combustion engines, shall be of a shade or density no darker than 40% opacity except as provided in these Regulations.

4.1.2 Visible emissions from any incinerator or new installation, except internal combustion engines, shall be of a shade or density no darker than 20% opacity, except as otherwise provided in these Regulations.

4.1.3 No owner or operator of a gasoline powered engine or vehicle shall allow, cause or permit the emissions of visible contaminants except for starting motion no farther than 100 yards, or for stationary operation not exceeding 3 minutes in any one hour.

4.1.4 Emissions from diesel engines manufactured after January 1, 1973 shall be of a shade or density no darker than 20% opacity, except for starting motion no farther than 100 yards or for stationary operation not exceeding 3 minutes in any hour.

4.1.5 Emissions from diesel engines manufactured before January 1, 1973 shall be of a shade or density no darker than 40% opacity, except for starting motion no farther than 100 yards or for stationary operation not exceeding 3 minutes in any hour.

4.1.6 Upon application, exceptions to Sections 4.1.4 and 4.1.5 may be granted by the Committee on a case by case basis for diesel locomotives operating above 6000 feet MSL.

4.1.7 Visible emissions exceeding the opacity standards for short time periods as the result of initial warm-up, soot blowing, cleaning of grates, building

* Part III of these Regulations may require more stringent controls than listed herein, in which case the requirements of Part III must be met.

new boiler fires, cooling, etc., caused by start-up or shutdown of a facility, installation or operation, shall not be deemed in violation provided that the executive secretary finds that adequate control technology has been applied.

4.1.8 Compliance Method. Emissions shall be brought into compliance with these requirements by reduction of the total weight of contaminants discharged per unit of time rather than by dilution of emissions with clean air.

4.1.9 Opacity Observation. Opacity observations of emissions from stationary sources shall be conducted in accordance with EPA Method 9, "Visual Determination of Opacity of Emissions from Stationary Sources"(40 CFR Part 60, Appendix A), attached as Appendix F to these Regulations. Opacity observers of mobile sources shall use procedures similar to Method 9, but the requirement for observations to be made at 15 second intervals over a 6-minute period shall not apply.

4.2 Sulfur Content of Fuels.

4.2.1 Coal or oil burned in any fuel burning or process installation shall contain no more than 1.0% sulfur by weight or 1.5% sulfur by weight respectively, except as provided in Section 4.2.2

4.2.2 Any person engaged in operating fuel burning equipment using coal or fuel oil, may apply for an exemption from the sulfur content restrictions of Section 4.2.1. His application shall furnish evidence, to the satisfaction of the executive secretary, that the fuel burning equipment is operating in such a manner as to prevent the emission of sulfur dioxide in amounts greater than would be produced under the limitations of Section 4.2.1. Control apparatus to continuously prevent the emission of sulfur greater than provided by Section 4.2.1 must be specified in the application for an exemption.

4.2.3 In case an exemption is granted, the operator shall install monitoring devices approved by the executive secretary. The operator shall provide the executive secretary with a monthly summary of the data from such monitors. This summary shall be such as to show the degree of compliance with Section 4.2.1 It shall be submitted no later than the calendar month succeeding its recording.

4.2.4 Methods for determining sulfur content of coal and fuel oil shall be those methods of the American Society for Testing and Materials.

4.4 Automobile Emission Control Devices. Any person owning or operating any motor vehicle or motor vehicle engine registered in the State of Utah on which is installed or incorporated a system or device for the control of crankcase emissions or exhuast emissions in compliance with the Federal motor vehicle rules, shall maintain the system or device in operable condition and

shall use it at all times that the motor vehicle or motor vehicle engine is operated. No person shall remove or make inoperable within the State of Utah the system or device or any part thereof, except for the purpose of installing another system or device, or part thereof, which is equally or more effective in reducing emissions from the vehicle to the atmosphere.

4.5 Fugitive Dust and Fugitive Emissions. The executive secretary shall review sources of fugitive dust and fugitive emissions not otherwise covered by these Regulations and propose to the Committee a list of types of such sources for which control strategies are to be adopted along with reasons for that proposal, and control strategies for sources or types of sources of fugitive dust and fugitive emissions contained on the list.

This proposal, as modified by the Committee, shall be adopted through rulemaking procedures. Within 90 days after the Committee adopts the control strategy for a source or category of sources under this Section 4.5 the owner or operator of an existing source not meeting these requirements must submit a notice of intent as outlined in Section 3.1, together with a compliance schedule which shows compliance no later than December 31, 1982 or such later date as may be specified by Congress or the Environmental Protection Agency under the Clean Air Act.

4.6 Continuous Emissions Monitoring.

4.6.1 The owner or operators of the following types of stationary air pollution sources shall install, calibrate, operate and maintain equipment, approved by the executive secretary, for the continuous monitoring and recording of emission data as specified below:

| | Source Category | Emissions Monitoring Requirement |
|---|---|---|
| a. | Fossil Fuel Fired Steam Generators (250 million BTU/hr. for each boiler) | Opacity (excluded where only gaseous fuel is used or where no visible emissions standard is applicable)<br><br>Sulfur dioxide (if sulfur dioxide control equipment has been installed) |
| b. | Nitric Acid Plants (Production capacity 300 tons per day, expressed as 100% acid) | Nitrogen oxides |
| c. | Sulfur Burning Production Acid Plants (Production capacity 300 tons per day, expressed as 100% acid) | Sulfur dioxide (for each sulfuric acid producing plant within the installation) |
| d. | Fluid Bed Catalytic Cracking Unit Catalyst Regenerators. | Opacity (for each regeneration unit to which a visible emissions standard is applicable) |

4.6.2 Minimum performance specifications for all continuous monitoring systems are those continued in 40 CFR, Part 60, Appendix B and 40 CFR, Part 51, Appendix P.

4.6.3 The installation and performance testing of appropriate monitoring equipment must be completed and monitoring and recording of data must begin within eighteen months of the effective date of this regulation, Section 4.6.

4.6.4 Reports.

a. Breakdown of a continuous emissions monitoring system must be reported to the executive secretary within 24 hours. Such report shall include the nature and cause of such breakdown; and steps taken to correct the problem.

b. Quarterly reports shall be submitted by the owner or operator (of each air contaminant source for which continuous emissions monitoring systems are required) to the executive secretary within 21 days following the end of each calendar quarter. Quarterly reports shall contain appropriate information as follows:

(1) Any emission exceeding emission limitations as follows:

(a) Opacity

(b) Gaseous emissions (sulfur dioxide and/or nitrogen oxides)

(2) Emissions data shall be reduced to appropriate standard units as prescribed in 40 CFR, Part 51, Appendix P, Paragraph 5.

(3) When no excess emissions have occurred and/or the continuous emissions monitoring system has not been inoperative, repaired or adjusted, a statement to that effect will be included.

(4) Breakdown of a continuous emissions monitoring system must be reported to the executive secretary. Such report shall include: the nature and cause of such breakdown, and steps taken to correct this problem.

4.6.5 Alternate monitoring methods may be authorized by the executive secretary if it can be shown, upon formal application by the owner or operator of an air contaminant source that installation of a continuous monitoring system will not provide an accurate determination of emissions, the affected air contaminant source is infrequently operated, the physical limitation of the air contaminant source prevents installation of the proper system or the installation of such a system would impose an extreme economic burden on the owner or operator.

4.7 Unavoidable Breakdown. This applies to all pollutants for which there are National Ambient Air Quality Standards except for sulfur dioxide emitted from existing non-ferrous smelters which are covered in Section 4.3.2.

a. Reporting. Except as otherwise provided in this Section, 4.7, excessive emissions resulting from the unavoidable breakdown of equipment or procedural errors will not be deemed a violation of this regulation. Breakdowns must, however, be reported immediately (within 4 hours if possible but in no case longer than 24 hours) to the executive secretary. During times other than normal office hours, breakdowns shall be initially reported to the Environmental Health Emergency Response Coordinator, Telephone (801) 533-6145. Within 5 days of the beginning of such an incident, a written report shall be submitted to the executive secretary which shall include the cause and nature of the event, estimated quantity of pollutant (total and excess), time of emissions and steps taken to control the emissions and to prevent recurrence. The submittal of such information shall be used by the executive secretary in determining whether a violation has occurred and/or the need of further enforcement action. If such emissions are predictable, they are covered by the variance procedure. Failures that are caused entirely or in part by poor maintenance, careless operation, or any other preventable upset condition or preventable equipment breakdown shall not be considered unavoidable breakdown.

b. Penalties. Failure to comply with the reporting procedures of Section 4.7.a will constitute a violation of these Regulations.

c. The owner or operator of an installation suffering an unavoidable breakdown of equipment or procedural errors shall assure that production, operation and/or activities are curtailed such that emissions from such production, operation and/or activity do not exceed the effective capacity of the functional pollution control equipment. In the event that production, operation and/or activities cannot be curtailed without jeapordizing equipment or safety in the installation or the operation of related installations or facilities and there are no other reasonably available alternatives the owner or operator of the source shall use the most rapid, practical procedure to reduce emissions. The owner or operator of any installation subject to an SIP emission limitation pursuant to these Regulations shall be deemed to have complied with the provisions of Section 4.7 if the emission limitation has not been exceeded.

d. Failure to comply with curtailment actions required by Section 4.7.c will constitute a violation of these Regulations.

4.8 In accordance with Section 110(a)(6), Clean Air Act as amended August 1977, owners or operators may not temporarily reduce the pay of any employee by reason of the use of a supplemental or intermittent or other dispersion dependent control system for the purposes of meeting any air pollution requirement adopted pursuant to the Clean Air Act as amended August 1977.

4.9 Nonattainment Area Requirements - Ozone. The provisions of this Section 4.9 are applicable only to sources located in a nonattainment area for ozone as defined in the State Implementation Plan.

4.9.1 Petroleum Liquid Storage. 11/79

a. Any existing stationary storage tank, reservoir or other container with a capacity greater than 40,000 gallons (150,000 liters) which is used to store volatile petroleum liquids with a true vapor pressure greater than 10.5 kilo pascals (1.52 psia) at storage temperature shall be fitted with control equipment which will minimize vapor loss to the atmosphere. Such storage vessels, except storage vessels erected before January 1, 1979 which are equipped with external floating roofs, shall be fitted with an internal floating roof which shall rest on the surface of the liquid contents and shall be equipped with a closure seal or seals to close the space between the roof edge and the tank wall, or, alternative equivalent controls provided the design and effectiveness of such equipment is documented and submitted to and approved by the Executive Secretary.

b. All control equipment on storage vessels shall be properly installed and maintained. There shall be no visible holes, tears or other openings in any seal or seal fabric and; all openings, except stub drains, shall be equipped with covers, lids, or seals. The owner or operator shall conduct routine inspections from the top of the tank for external floating roofs or through roof hatches for internal floating roofs at six month or shorter intervals and shall maintain a record of such inspections. At least once each year a close visible inspection of the cover and seal shall be made to insure there are no holes, tears, or other openings in the seal or seal fabric. A record of the results of inspections shall be maintained by the owner or operator and be available for inspection.

c. Petroleum Liquid Storage (External Floating Roof) 4/2/81

(1) Except where specifically exempted (see 4.9.1.c (4)) all existing external floating roof tanks with capacities greater than 950 bbls (40,000 gals) shall be retrofitted with a continuous secondary seal extending from the floating roof to the tank wall (a rim-mounted secondary seal) if:

(a) The tank is a welded tank, the true vapor pressure of the contained liquid is 27.6 KPa (4.0 psi) or greater and the primary seal is one of the following:

i. A metallic type shoe seal, a liquid-mounted foam seal, a liquid-mounted liquid-filled seal, or

ii. Any other primary seals which can be demonstrated equivalent to the above primary seals.

(b) The tank is a riveted tank, the true vapor pressure of the contained liquid is 10.5 KPa (1.5 psi) or greater, and the primary seal is as described in 4.9.1.c(1)(a).

(c) The tank is a welded or riveted tank, the true vapor pressure of the contained liquid is 10.5 KPa (1.5 psi) or greater and the primary seal is vapor-mounted. When such primary seal closure device can be demonstrated equivalent to the primary seals described in 4.9.1.c(1)(a), these processes apply.

(2) The seal closure devices shall meet the following requirements:

(a) There shall be no visible holes, tears, or other openings in the seal(s) or seal fabric.

(b) The seal(s) must be intact and uniformly in place around the circumference of the floating roof between the floating roof and the tank wall.

(c) For vapor mounted primary seals, the accumulated area of gaps between the secondary seal and the tank wall shall not exceed 21.2 $cm^2$ per meter of tank diameter (1.0 $in^2$ per ft. of tank diameter) and the width of any gap shall not exceed 1.27 cm (1/2 in.).

(3) All openings in the external floating roof, except for automatic bleeder vents, rim space vents, and leg sleeves, shall provide a projection below the liquid surface. The openings shall be equipped with a cover, seal or lid. The cover, seal or lid is to be in a closed position at all times except when the device is in actual use. Automatic bleeder vents shall be closed at all times except when the roof is floated off or landed on the roof leg supports and rim vents shall be set to open when the roof is being floating off the leg supports or at the manufacturer's recommended setting. Any emergency roof drain shall be provided with a slotted membrane fabric cover or equivalent cover that covers at least 90 percent of the area of the opening.

(4) The following are specifically exempted from the requirements of 4.9.1.c(1):

(a) External floating roof tanks having capacities less than 10,000 bbls (420,000 gals) used to store produced crude oil and condensate prior to custody transfer.

(b) A metallic type shoe seal in a welded tank which has a secondary seal from the top of the shoe seal to the tank wall (a shoe mounted secondary seal).

(c) External floating roof tanks storing waxy, heavy pour crudes.

(d) External floating roof tanks with a closure seal device or other devices installed which will control VOC emissions with an effectiveness equal to or greater than the seals required in 4.9.1.c(1).

(5) The owner or operator shall conduct routine visual inspections semi-annually. Measurement of the secondary seal gap shall be made annually. A record of such inspections shall be maintained for a minimum of two years, and shall be made available to the Executive Secretary upon request.

(6) The owner or operator of a petroleum liquid storage vessel with an external floating roof not subject to this regulation, but containing a petroleum liquid with a true vapor pressure greater than 7.0 KPa (1.0 psi), shall maintain records of the average monthly storage temperature, the type of liquid, throughput quantities, and the maximum true vapor pressure. These records shall be maintained for a minimum of two years, and shall be made available to the Executive Secretary upon request.

4.9.2 Petroleum Liquid Transfer/Storage 11/79

a. Loading of Tank Trucks, Trailers, Railroad Tank Cars, and Other Transport Vehicles. Emissions from the bulk loading of gasoline into any tank truck, trailer, railroad tank car, or other transport vehicle shall be controlled by use of a vapor collection system. Such vapor collection system shall be properly installed and maintained. The loading device shall not leak and shall be designed and operated to allow no more than an average of 15 cc drainage per disconnect for 5 consecutive disconnects. All loading and vapor lines shall be equipped with fittings which make a vapor tight connection and shall be closed prior to disconnection as to prevent release of the organic material. Reasonably available control technology shall be required and in no case shall vapor emissions to the atmosphere exceed 0.640 pounds per 1,000 gallons transferred. A gasoline storage and transfer installation that receives inbound loads and dispatches outbound loads ("bulk plant") need not comply with this paragraph

4.9.2.a if it does not have a daily average throughput of more than 3,900 gallons (15,000 or more liters) of gasoline. Such installation shall, however, only onload and offload gasoline by use of bottom or submerged filling or alternative equivalent methods. The emission limitation is based on operating procedures and equipment specifications using Reasonably Available Control Techniques as defined in EPA documents EPA 450/2-77-026 October 1977, "Control of Hydrocarbons from Tank Truck Gasoline Loading Terminals", and EPA-450/2-77-035 December 1977, "Control of Volatile Organic Emissions from Bulk Gasoline Plants". The design effectiveness of such equipment and the operating procedures must be documented and submitted to and approved by the Executive Secretary.

Testing procedures of vapor collection systems shall be as described in Section B of EPA Guideline Document EPA 450/2-78-51 OA-QPS No. 1.2 - 119 December 1978. Control of Volatile Organic Compound Leaks From Gasoline Tank Trucks and Vapor Collection Systems. Semi-annual testing shall be conducted and records maintained of such tests. The frequency of tests may be altered by the Executive Secretary upon submittal of documentation which would justify a change.

b. Stationary Source Container Loading. No transfer of gasoline from any delivery vessel (i.e. tank truck or trailer) into any stationary storage container with a capacity of 250 gallons or greater shall be permitted unless at least 90 percent of the gasoline vapor, by weight, displaced during the filling of the stationary storage container is prevented from being released to the atmosphere. This requirement shall not apply to

(1) the transfer of gasoline into any stationary storage container of less than 550 gallons used primarily for the fueling of implements of husbandry if such container is equipped wih a permanent submerged fill pipe,

(2) the transfer of gasoline into any stationary storage container having a capacity of less than 2,000 gallons which was installed prior to January 1, 1979, if such container is equipped with a permanent submerged fill pipe.

(3) the transfer of gasoline to storage tanks equipped with floating roofs or their equivalent which have been approved by the Executive Secretary.

The 90 percent performance standard shall be based on operating procedures and equipment specifications. The design effectiveness of such equipment and the operating procedure must be documented and submitted to and approved by the Executive Secretary.

c. Transport Vehicles. Transport vehicles must be designed and maintained to be vapor tight during loading and unloading operations as well as during transport, except for normal pressure venting required under United States Department of Transportation Regulations. A vapor-laden transport vehicle may be refilled only at installations equipped to recover, process and/or dispose of vapors. Transport vehicles which only service locations with storage containers specifically exempted from the requirements of paragraph 4.9.2.b need not be retrofitted to comply with this paragraph 4.9.2.c., provided such transport vehicles are loaded through a submerged fill pipe or equivalent equipment provided the design and effectiveness of such equipment are documented and submitted to and approved by the Executive Secretary.

Gasoline tank trucks and their vapor collection systems shall be tested for leakage by the procedures described in Appendix A, EPA Guidance Document, 450/2-78-051 OAQPS No. 1.2-119, "Control of Volatile Organic Compound Leaks from Gasoline Trucks and Vapor Collection Systems". The tank shall not sustain a pressure change of more than 750 pascals (3 inches of $H_2O$) in five minutes when pressurized (by air or inert gas) to 4500 pascals (18 inches of $H_2O$) or evacuated to 1500 pascals (6 inches of $H_2O$). Gasoline tank truck tanks shall be certified leak tight at least annually by a qualified contractor approved by the Executive Secretary. Certificates of inspection shall be retained by the owner/operator of the tank truck for a two year period and be available for review by the Executive Secretary or his representative.

4.9.3 Control of Hydrocarbon Emissions in Refineries 4/2/81

a. Vacuum Producing Systems - The emission of noncondensable volatile organic compounds from the condensers, hot wells, or accumulators of vacuum producing systems shall be controlled by

(1) piping the noncondensable vapors to a firebox, or incinerator, or

(2) compressing the vapors and adding them to the refinery fuel gas, or

(3) other equally effective means provided the design and effectiveness of such means are documented and submitted to and approved by the Executive Secretary.

b. Wastewater (Oil/Water) Separators. Any wastewater separator handling volatile organic compounds shall

(1) be eqipped with covers and seals approved by the Executive Secretary on all separators and forebays,

(2) be equipped with lids or seals on all openings in covers, separators, and forebays. Such lids or seals shall be in the closed position at all times except when in actual use, and

(3) be designed such that all wastewater contaminants with volatile organic compounds are directed into a closed drainage system to the wastewater separator.

c. Process Unit Turnaround - The owner or operator of a petroleum refinery shall insure that a minimum of volatile organic compounds (VOC) are emitted to the atmosphere during process unit turnarounds by

(1) venting of the process unit or vessel to a vapor recovery system, flare or firebox, and

(2) limiting emissions of volatile organic compounds from a process unit or vessel until its internal pressure is 136 Kilo pascals (19.7 psia) or less, or

(3) an equally effective system provided the design and effectiveness of such system are documented and submitted to and approved by the Executive Secretary.

d. Catalytic Cracking Units - Flue gas produced by catalytic cracker catalyst regeneration units shall be vented to a waste heat boiler, a process heater firebox, incinerated, or controlled by other methods provided the design and effectiveness of such methods are documented and submitted to and approved by the Executive Secretary.

e. Safety Pressure Relief Valves - No safety pressure relief valve of more than a nominal 1" pipe inlet diameter shall be used on any equipment handling organic material above 15 psia (approximately 2.17 kilo pascals) unless the safety pressure relief valve is vented to a vapor recovery or disposal system, or protected by a ruptured disk, or is maintained by an inspection system approved by the Executive Secretary.

f. Leaks from Petroleum Refinery Equipment - Any affected installation within a petroleum refinery complex found to be leaking shall be repaired as soon as practicable, but not later than fifteen (15) days. A leaking installation is defined as one which has a VOC concentration exceeding 10,000 parts per million (ppm) when tested by a VOC detection instrument at the leak source in the manner described in Appendix F.

(1) Monitoring Requirements: In order to ensure that all existing VOC leaks are identified and that new VOC leaks are located as soon as practicable, the refinery owner or operator shall perform necessary monitoring using the method described in Appendix F as follows:

(a) Monitor with a portable VOC detection device at least one time per year (annually):

All pump seals,

Pipeline valves in liquid service, and process drains,

(b) Monitor with a portable VOC detection device four times per year (quarterly):

All compressor seals,

Pipeline valves in gaseous service,

Pressure relief valves in gaseous service.

(c) Monitor visually fifty two (52) times per year (weekly):

All pump seals.

(d) Monitor any relief valve within 24 hours after it has been vented to the atmosphere; and

(e) Monitor immediately after repair any component that was found leaking.

For the purpose of this section, gaseous service for pipeline valves and pressure relief valves is defined as the VOC being gaseous at conditions that prevail in the installation during normal operations. Installations subject to leaks shall be noted or marked so that their location within the refinery complex is obvious to the refinery operator performing the monitoring and to the State of Utah, Bureau of Air Quality Enforcement personnel.

(2) Exemptions. The following are exempt from the monitoring requirements of Paragraph 4.9.3(f)(1):

a. Pressure relief devices which are connected to an operating flare header, vapor recovery devices, inaccessible valves, storage tank valves, and valves that are not externally regulated.

b. Refinery equipment components which handle only organic liquids with a Reid vapor pressure less than 78 mm Hg (1.5 PSIA).

c. Refinery equipment components which handle only natural gas, methane or ethane.

d. Valves or flares or instrument and/or sample lines with a diameter 1.8 cm (0.75 inch) or less.

(3) Alternative Monitoring Requirements: If at any time after two complete liquid service inspections and four complete gaseous service inspections, the owner or operator of a petroleum refinery can demonstrate compliance with less frequent monitoring he may apply to the Air Conservation Committee for variance from the monitoring frequency requirements of this Section 4.9.3(f).

(4) Recording Requirements: Identified leaks shall be noted and affixed with a readily visible tag bearing the identification of the leak and the date the leak was located. The tag shall remain in place until the leaking component is repaired. The tag is not necessary when the leak is detected and repaired on the spot. The presence of the leak shall also be noted in a log maintained by the operator or owner of the refinery. The log shall contain, at a minimum, the name of the process unit where the component is located, the type of components, the tag number, the date the leak was detected, the date repaired, and the date the recheck of the component is made. The operator or owner of the refinery complex shall retain the leak detection log for two years after the leak has been repaired and shall make the log available to the Executive Secretary upon request.

(5) Reporting Requirements: The operator or owner of a petroleum refinery complex shall submit a report to the Executive Secretary, Utah Air Conservation Committee, by the 15th day of January, April, July, and October of each year listing all leaks that have been located during the previous 3 calendar months but not repaired within fifteen (15) days and all leaking components awaiting unit turnaround. In addition, the refinery operator or owner shall submit a signed statement once a year (annually) that all monitoring has been performed as stipulated in Appendix F. Such report shall be submitted by January 15 for the preceding year.

(6) Additional Requirements: Any time a valve is located at the end of a pipe or line containing VOC, the end of the line shall be sealed with one of the following: a second valve, a blind flange, a plug or a cap and shall only be removed when in use and during VOC monitoring.

4.9.4 Degreasing and Solvent Cleaning Operations. 11/79 - The provisions of this paragraph are applicable to the use of all volatile organic compounds except methane, ethane, 1,1,1-Trichloroethane and trichlorotrifluoroethane, and methylene chloride.

a. Cold Cleaning Facilities. No owner or operator shall operate a degreasing or solvent cleaning operation unless:

(1) a cover is installed which cover shall remain closed except during actual loading, unloading or transfer operations;

(2) an internal draining rack for cleaned parts is installed which parts shall be drained until all dripping ceases;

(3) Waste or used solvent shall be stored in covered containers and disposed of by a method which prevents its emission to the atmosphere.

(4) Tanks, containers and all associated equipment are maintained in good operating condition and leaks are repaired immediately; and

(5) Written procedures for the operation and maintenance of the degreasing or solvent cleaning equipment are posted in an accessible and conspicuous location near the equipment.

b. Open Top Vapor Degreaser - Owners or operators of open top vapor degreasers shall, in addition to meeting the requirements of paragraph 4.9.4.a(3), (4), and (5),

(1) Equip the vapor degreaser with a cover that can be opened and closed without disturbing the vapor zone. The cover shall be closed except when processing work loads;

(2) Install one of the following control devices;

(a) Powered cover, if the freeboard ratio is greater than or equal to 0.75 and if the degreaser opening is greater than 1 square meter (10 square feet),

(b) Refrigerated chiller,

(c) Enclosed design (cover or door opens only when the dry part is actually entering or exiting the degreaser),

(d) Carbon adsorption system, with ventilation greater than or equal to 15 cubic meters per minute per square meter (50 cubic feet per minute per square foot) of air/vapor area when cover is open and exhausting less than 25 parts per million of solvent averaged over one complete adsorption cycle, or

(e) An equivalent control system provided the design and effectiveness of such system are documented and submitted to and approved by the Executive Secretary.

(3) Minimize solvent carryout by:

(a) Racking parts to allow complete drainage,

(b) Moving parts in and out of the degreaser at less than 3.3 meters per second (11 feet per minute),

(c) Holding the parts in the vapor zone at least 30 seconds or until condensation ceases,

(d) Tipping out any pool of solvent on the cleaned parts before removal, and,

(e) Allowing the parts to dry within the degreaser for at least 15 seconds or until visibly dry.

(4) Spray parts only in or below the vapor level,

(5) Repair solvent leaks immediately,

(6) Not use ventilation fans near the degreaser opening, nor provide exhaust ventilation exceeding 20 cubic meters per minute per square meter (65 cubic feet per minute per square foot) in degreaser open area, unless necessary to meet State and Federal occupational, health, and safety requirements,

Open top degreasers with an open area smaller than one square meter (10.9 square feet) are exempt from paragraphs 4.9.4.b(2)(b) and (d).

c. Conveyorized Degreasers. Owners and operators of conveyorized degreasers shall, in addition to meeting the requirements of paragraph 4.9.4.a (3), (4), and (5) and 4.9.4.b(6):

(1) Install one of the following control devices for conveyorized degreasers with an air/vapor interface equal to or greater than 2.0 square meters (21.6 square feet):

(a) Refrigerated chiller;

(b) Carbon adsorption system, with ventilation greater than or equal to 15 cubic meters per minute per square meter (50 cubic feet per minute per square foot) of air/vapor area when downtime covers are open, and exhausting less than 25 parts per million of solvent, by volume, averaged over a complete adsorption cycle; or

(c) A system demonstrated to have control efficiency equivalent to or greater than any of the above and approved by the Executive Secretary.

(2) Equip the cleaner with equipment, such as a drying tunnel or rotating (tumbling) basket, sufficient to prevent cleaned parts from carrying out solvent liquid or vapor.

(3) Provide downtime covers for closing off the entrance and exit during shutdown hours.

(4) Minimize carryout emissions by racking parts for best drainage and maintaining the vertical conveyor speed at less than 3.3 meters per minute (11 feet per minute).

4.9.5 Cutback Asphalt. 11/79 - After December 31, 1982, no person shall cause, allow, or permit the use or application of cutback asphalt, or an emulsified asphalt containing petroleum solvents (diluents), except as provided below:

(1) Where the use or application commences on or after October of any year and such use or application is completed by May of the following year;

(2) Where long-life (longer than 1 month) stockpile storage is necessary;

(3) Where the asphalt is to be used solely as a penetrating prime coat; or

(4) Where the user can demonstrate that there are no emissions of organic compounds from the asphalt under conditions of normal use.

4.9.6 4/2/81 - Volatile Organic Compounds used for coating paper, fabric, vinyl, metal furniture, large appliances, magnet wire, flat wood paneling, miscellaneous metal parts and products, and graphic arts.

a. Paper Coating: This section applies to roll, knife rotogravure coater(s) and drying oven(s) of paper coating operations.

(1) No owner or operator of a paper coating operation subject to this section may cause, allow or permit the discharge into the atmosphere of any Volatile Organic Compound in excess of 0.35 kilograms per liter of coating (2.9 pounds per gallon), excluding water, delivered to the coating application from a paper coating operation.

(2) The emission limit specified above shall be achieved by:

(a) The application of a low solvent technology coating or,

(b) Incinceration, provided that a minimum of 90 percent of non-methane volatile organic compounds (VOC measured as total combustible carbon) which enter the incinerator are oxidized to carbon dioxide and water; or,

(c) Through carbon adsorption provided that there is a minimum of 90% reduction efficiency of captured VOC emissions; or

(d) Other equivalent methods or techniques approved by the Executive Secretary.

b. Fabric and Vinyl Coating - This paragraph applies to roll, knife or rotogravure coater(s) and drying oven(s) of fabric and vinyl coating operations.

(1) No owner or operator of a fabric or vinyl coating line subject to this section may cause, allow or permit the discharge into the atmosphere of any volatile organic compound(s) in excess of:

(a) 0.35 kilograms per liter of coating (2.9 pounds per gallon), excluding water, delivered to the coating applicator from a fabric coating line.

(b) 0.45 kilograms per liter of coating (3.8 pounds per gallon), excluding water, delivered to the coating applicator from a vinyl coating line.

(2) The emission limitations specified above shall be achieved by:

(a) The application of a low solvent content coating technology; or

(b) Incineration, provided that a minimum of 90 percent of the nonmethane volatile organic compounds (VOC measured as total combustible carbon) which enter the incinerator are oxidized to carbon dioxide and water; or

(c) Through carbon adsorption provided that there is a minimum of 90 percent reduction efficiency of captured VOC emissions or

(d) By other equivalent methods or techniques approved by the Executive Secretary.

c. Metal Furniture Coating VOC Emissions - This regulation applies to the application area(s), flashoff area(s), and oven(s) of metal furniture coating lines involved in prime and top-coat or single coat operations.

(1) No owner or operator of a metal furniture coating line subject to this section may cause, allow or permit the discharge into the atmosphere of any volatile organic compound in excess of 0.3 kilgrams per liter of coating (3.0 ounds per gallon) excluding water, delivered to the coating applicator from prime and topcoat or single coat operations.

(2) The emission limitation specified above shall be achieved by:

(a) The application of low solvent technology; or

(b) Incineration, provided that a minimum of 90 percent of the nonmethane volatile organic compounds (VOC measured as total combustible carbon) which enter the incinerator are oxidized to carbon dioxide and water; or

(c) By other equivalent methods or techniques approved by the Executive Secretary.

d. Large Appliance Surface Coating VOC Emissions - This regulation applies to application area(s) flashoff area(s) and oven(s) of large appliance coating lines involved in prime, single or top coating operations.

(1) No owner or operator of a large appliance coating line subject to this section may cause, allow or permit the discharge to the atmosphere of any volatile organic compounds in excess of 0.34 kilograms per liter of coating (2.8 pounds per gallon), excluding water, delivered to the coating applicator from prime, single, or top-coat coating operations.

(2) The emission limitations specified above shall be achieved by:

(a) The application of low solvent content technology; or

(b) Incineration provided 90 percent of the nonmethane volatile organic compounds (VOC measured as total combustible carbon) which enter the incinerator are oxidized to carbon dioxide and water; or,

(c) By other equivalent techniques or methods approved by the Executive Secretary.

e. Magnet Wire Coating VOC Emissions - This regulation applies to oven(s) of magnet wire coating operations.

(1) No owner or operator of a magnet wire coating oven subject to this section may cause, allow or permit discharge into the atmosphere of any volatile organic compounds in excess of 0.20 kilograms per liter of coating (1.7 pounds per gallon), excluding water, delivered to the coating applicator from magnet wire coating operations.

(2) The emission limitations specified above shall be achieved by:

(a) The application of low solvent content coating technology; or

(b) Incineration, provided that a minimum of 90 percent of the nonmethane volatile organic compounds (VOC measured as total combustible carbon) which enter the incinerator are oxidized to carbon dioxide and water; or

(c) By other equivalent techniques or methods approved by the Executive Secretary.

f. Flat Wood Coating - This regulation applies to the application area(s) of flatwood coating operations involved in filler, sealer, groove coat, primer, stain, basecoat, inks, and topcoat operations.

(1) No owner or operator of an interior printed hardwood, plywood, and particle board coating operation may cause, allow or permit discharge to the atmosphere of any organic volatile compound in excess of a weighted average VOC content of 0.29 kilograms per liter

(2.5 pounds per gallon), excluding water, delivered to a coating application from filler, sealer, groove coat, primer, stain, basecoat, ink and topcoat operation.

(2) No owner or operator of a natural finish hardwood plywood coating operation may cause, allow or permit discharge to the atmosphere any organic volatile compound in excess of an average VOC content of 0.40 kilograms per liter (3.3 pounds per gallon) excluding water, delivered a coating applicator from filler, sealer, groove coat, primer, stain basecoat, ink and topcoat operations.

(3) No owner or operator of a Class II hardwood panel finish operation may cause, allow or permit discharge to the atmosphere of any organic volatile compound in excess of an average VOC content of 0.43 kilograms per liter (3.6 pounds per gallon), excluding water, delivered to a coating applicator from filler, sealer, groove coat, primer, stain, basecoat, ink, and topcoat operations.

(4) The emission limitations specified above shall be achieved by:

(a) The application of low solvent technology; or

(b) The application of water-borne coating technology; or

(c) The application of ultraviolet-curable coating technology; or

(d) By other equivalent techniques or methods approved by the Executive Secretary.

(5) This regulation does not apply to the manufacture of exterior siding, tile board, or particle board used as a furniture component.

g. Miscellaneous Metal Parts and Products VOC Emissions - This section applies to the application area(s), flashoff area(s) air and forced air dryer(s), and oven(s) used in the surface coating of miscellaneous metal parts and products:

(1) Applicable Industries:

(a) Large farm machinery (harvesting, fertilizing, planting, tractors, combines, etc.)

(b) Small farm machinery (lawn and garden tractors, lawn mowers, rototillers, etc.)

(c) Small appliance (fans, mixers, blenders, crock pots, vacuum cleaners, etc.)

(d) Commercial machinery (computers, typewriters, calculators, vending machines, etc.)

(e) Industrial machinery (pumps, compressors, conveyor components, fans, blowers, transformers, etc.)

(f) Fabricated metal products (metal covered doors, frames, trailer frames, etc.)

(g) Any other industrial category which coats metal parts or products under the standard Industrial Classfiication Code of major group 33 (primary metal industries), major group 34 (fabricated metal products), major group 35 (nonelectric machinery), major group 36 (electrical machinery), major group 37 (transportation equipment) major group 38 (miscellaneous instruments), and major group 39 (miscellaneous manufacturing industries).

This regulation does not apply to (1) the surface coating of automobiles and light-duty trucks, (2) flat metal sheets and strips in the form of rolls or coils, (3) exterior of airplanes, (4) Automobile refinishing, (5) Exterior of marine vessels, (6) customized top coating of automobiles and trucks if production is less than 35 vehicles per day, and (6) metal cans, (7) a source whose VOC emissions are less than 10 tons/year.

(2) No owner or operator of a facility engaged in the surface coating of miscellaneous metal parts and products may cause, allow or permit discharge to the atmosphere of any volatile organic compounds in excess of:

(a) 0.52 kilograms per liter (4.3 pounds per gallon) of coating, excluding water, delivered to a coating applicator that applies clear coating.

(b) 0.42 kilograms per liter (3.5 pounds per gallon) of coating, excluding water, delivered to a coating applicator in a coating application system that utilizes air or forced air dryers.

(c) 0.42 kilograms per liter (3.5 pounds per gallon) of coating, excluding water, delivered to a coating applicator that applies extreme performance coatings.

(d) 0.36 kilograms per liter (3.0 pounds per gallon) of coating, excluding water, delivered to a coating applicator for all other coating and coating application systems.

(3) If more than one emission limitation indicated in this section applies to a specific coating, then the least stringent emission limitation shall apply.

(4) The emission limitations set forth in paragraph (2) shall be achieved by:

(a) The application of low solvent technology; or

(b) An incineration system which oxidizes a minimum of 90 percent of the nonmethane volatile organic compounds (VOC measures as total combustible carbon) to carbon dioxide and water; or,

(c) By other equivalent techniques or methods approved by the Executive Secretary.

h. Graphic Arts - This regulation applies to: packaging rotogravure, publication roto-rotogravure or fexographic printing operations including specialty printing employing solvents containing ink with potential emissions of volatile organic compounds (VOC) equal to or greater than 90 megagrams/yr (100 tons/yr).

(1) No owner or operator of a packaging rotogravure, publication rotogravure, flexographic printing facility, or specialty printing operations employing solvent containing ink may operate, cause, or allow or permit the operation of a facility unless:

(a) The volatile fraction of ink, as it is applied to the substrate, contains 25.0 percent by volume or less of organic solvent and 75.0 percent by volume or more of water; or,

(b) The ink as it is applies to the substrate, less water, contains 60.0 percent by volume or more nonvolatile material; or

(c) The owner or operator installs and operates;

i. A carbon adsorption system which reduces the volatile organic emissions from the capture system by a minimum of 90.0 percent by weight; or

(c) 0.42 kilograms per liter (3.5 pounds per gallon) of coating, excluding water, delivered to a coating applicator that applies extreme performance coatings.

(d) 0.36 kilograms per liter (3.0 pounds per gallon) of coating, excluding water, delivered to a coating applicator for all other coating and coating application systems.

(3) If more than one emission limitation indicated in this section applies to a specific coating, then the least stringent emission limitation shall apply.

(4) The emission limitations set forth in paragraph (2) shall be achieved by:

(a) The application of low solvent technology; or

(b) An incineration system which oxidizes a minimum of 90 percent of the nonmethane volatile organic compounds (VOC measures as total combustible carbon) to carbon dioxide and water; or,

(c) By other equivalent techniques or methods approved by the Executive Secretary.

h. Graphic Arts - This regulation applies to: packaging rotogravure, publication roto-rotogravure or fexographic printing operations including specialty printing employing solvents containing ink with potential emissions of volatile organic compounds (VOC) equal to or greater than 90 megagrams/yr (100 tons/yr).

(1) No owner or operator of a packaging rotogravure, publication rotogravure, flexographic printing facility, or specialty printing operations employing solvent containing ink may operate, cause, or allow or permit the operation of a facility unless:

(a) The volatile fraction of ink, as it is applied to the substrate, contains 25.0 percent by volume or less of organic solvent and 75.0 percent by volume or more of water; or,

(b) The ink as it is applies to the substrate, less water, contains 60.0 percent by volume or more nonvolatile material; or

(c) The owner or operator installs and operates;

i. A carbon adsorption system which reduces the volatile organic emissions from the capture system by a minimum of 90.0 percent by weight; or

ii. An incineration system which oxidizes a minimum of 90.0 percent of the nonmethane volatile organic compounds (VOC measured as total combustible carbon) to carbon dioxide and water; or

iii By other equivalent techniques or methods as approved by the Executive Secretary.

(2) A capture system must be used in conjunction with the emission control systems indicated in this section. The design and operation of a capture system must be consistent with good engineering practices and shall be required to provide for an overall reduction in volatile organic compound emissions of at least:

(a) 75.0 percent where a publication rotogravure process is employed;

(b) 65.0 percent where a packaging rotogravure process is employed; or,

(c) 60.0 percent where a flexographic printing process is employed.

i. Exemptions - This Section 4.9.6 shall apply to:

(1) Sources whose emissions of volatile organic compounds are not more than 6.8 kilograms (15 pounds) in any 24 hour period, nor more than 1.4 kilograms (3 pounds in any one (1) hour) provided the emission rates are certified by July 1981.

(2) Sources used exclusively for chemical or physical analysis or determination of product quality and commercial acceptance provided;

(a) the operation of the source is not an integral part of the production process; and

(b) The emissions from the source do not exceed 363 kilograms (800 pounds) in any one calendar month.

(3) For the purposes of this Section 4.9.6 the following shall not be considered volatile organic compounds:

(a) Methane

(b) Ethane

(c) 1,1,1-Trichloroethane (Methyl chloroform)

(d) Trichlorotrifluoroethane (freon 113)

j. Capture Systems - A capture system must be used in conjunction with VOC emissions control systems set forth in this Section 4.9.6, such as incineration, carbon adsorption, or alternate control systems. The design and operation of the capture system must be consistent with good engineering practices and shall be required to provide an overall reduction of VOC emissions set forth in these regulations.

k. Testing and Monitoring - Upon request by the Executive Secretary of the Air Conservation Committee, the owner or operator of a volatile organic compound source required to comply with Section 4.9.6 shall demonstrate compliance by the method approved by the Executive Secretary.

(1) Test procedures to determine compliance with Section 4.9.6 must be approved by the Executive Secretary and be consistent with:

(a) EPA Guideline Series document, Measurement of Volatile Organic Compounds", EPA-450/2-78-041; and

(b) Appendix A of "Control of Volatile Organic Emissions from Emissions from Existing Stationary Sources - Volume II; Surface Coating of Cans, Coils, Paper, Fabric, Automobile, and Light-Duty Trucks", EPA-450/2-77-008.

(2) If add-on control equipment is used, continuous monitors of the following parameters shall be installed, periodically calibrated, and operated at all times that the associated control equipment is operating:

(a) Exhaust gas temperatures of all incinerators;

(b) Temperature rise across a catalytic incinerator bed;

(c) Breakthrough of VOC on a carbon adsorption unit; and

(d) Any other continuous monitoring or recording device required by the Executive Secretary.

4.9.7 Synthesized Pharmaceutical Manufacturing - 4/2/81 - The owner or operator of a synthesized pharmaceutical manufacturing installation shall control the emission of volatile organic compounds as outlined in the following sections:

a. Surface condensers or equivalent controls shall be used to control VOC emissions from all reactors, distillation operations, crystallizers, centrifuges and vacuum dryer that have the potential to emit 6.80 kg/day (15 lbs/day) or more of VOC. If surface condensers are employed, the condenser outlet gas temperature must not exceed the specified value in the following table:

| Temperature | VOC Vapor Pressure (Measures at 20°C) |
|---|---|
| -25°C | 40.0 KPa (5.8 psi) |
| -15°C | 20.0 KPa (2.9 psi) |
| 0°C | 10.0 KPa (1.5 psi) |
| 10°C | 7.0 KPa (1.0 psi) |
| 25°C | 3.5 KPa (0.5 psi) |

b. VOC emissions from all air dryers and production equipment exhaust systems shall be reduced at least 90 percent if emissions are 150 kg/day (330 lbs/day) or more, or to 15 Kg/day (33 lbs/day) if emissions are less than 150 kg/day (330 lbs/day).

c. A vapor balance system or equivalent control that is at least 90 percent effective shall be provided to reduce emissions from truck or railcar deliveries to storage tanks with capacities greater than 7500 liters (2,000 gal) that store VOC with vapor pressures greater than 28.0 Kpa (4.1 psi) at 20°C.

d. Pressure/vacuum conservation vents set at ± 0.2 KPa shall be installed on all storage tanks that store VOC with vapor pressures greater than 10.0 KPa (1.5 psi) at 20°C, unless an equivalent control system has been approved by the Executive Secretary.

e. All centrifuges, rotary vacuum filters, and other filters which process liquids containing VOC with vapor pressures of 3.50 KPa (0.5 psi) or more at 20°C shall be enclosed.

f. All leaks from which a liquid, containing VOC, can be observed running or dripping shall be repaired. The repair shall be completed the first time the equipment is off-line for a period long enough to complete the repair.

g. Alternative control methods to sections (a), (b), or (d) may be approved by the Executive Secretary if it is demonstrated that the aggregate VOC emissions will not be greater than that which would be permitted through conformance with the applicable VOC emission reduction regulations.

h. Test procedures to determine compliance with this regulation must be approved by the Executive Secrtary and be consistent with EPA Guideline Series document, "Measurement of Volatile Organic Compounds", EPA-45/2-78-041. A person proposing to conduct a volatile organic compounds emissions test shall notify the Executive Secretary not less than 30 days before the proposed initiation of the test. Upon request of the Executive Secretary, the owner or operator of a VOC source regulated under this section shall, at his own expense, demonstrate compliance with this regulation.

(1) If add-on control equipment is used, continuous monitors of the following parameters shall be installed, periodically calibrated, and operated at all times the associated control equipment is operating:

(a) Exhaust gas temperature of all incinerators;

(b) Temperature rise across a catalytic incinerator bed;

(c) Breakthrough of VOC on a carbon absorption unit; and

(d) Any other continuous monitoring or recording device required by the Executive Secretary.

4.9.8 Perchloroethylene Dry Cleaning Plants 4/2/81

All dry cleaning plants using perchloroethylene, which are located in an actual nonattainment area for ozone, are subject to the provisions of this section.

a. Operating Procedures: After the effective date established in Section 4.9.9, a person shall not operate any dry cleaning equipment unless all of the following requirements are satisfied:

(1) Any solvent liquid or solvent vapor leaks shall be repaired as soon as practicable.

(2) The residue from a solvent still shall not contain more than 0.6 kg of solvent per kg of wet waste.

(3) The used diatomaceous earth filters shall be cooked or treated so that the residue contains no more than 0.25 kg of solvent per kg of wet waste.

(4) Filtration cartridges must be drained in the filter housing at least 24 hours before being discarded. The drained cartridges should be dried in the dryer tumbler after draining.

b. Any other filtration or distillation system may be used provided that it can be demonstrated to the satisfaction of the Executive Secretary that it reduces waste losses to less than 0.01 kg/per kg of clothes cleaned.

c. Dry cleaning plants which consume less than 1200 liters (320 gallons) of perchloroethylene per year are exempted from the provisions of Section 4.9.8.D.

d. All plants which are not exempted by virtue of Section 4.9.8.C are required to install emissions control equipment which satisfies one of the following requirements:

(1) All exhaust gases from drying tumblers and cabinets are vented through a carbon adsorber or other control device which reduces the total emissions of organic compounds to the atmosphere during the entire cycle by at least 90 percent by weight.

(2) All of the exhaust gases from drying tumblers and cabinets are vented through a carbon adsorber or other control device which reduces the total emissions of organic compounds to the atmosphere during the entire drying cycle to 100 ppm or less before dilution.

e. Test procedures to determine compliance with this section must be approved by the Executive Secretary and be consistent with Appendix B of "Control of Volatile Organic Emissions from Perchloroethylene Dry Cleaning Systems", EPA-450/2-78-50.

4.9.9 Compliance Schedule 4/2/81

a. Within 180 days after the effective date of Sections 4.9.1.a and b; 4.9.2, 4.9.3.a through e, 4.9.4 and 4.9.5, the owner or operator of an existing installation which is required to comply with the provisions of any of these sections must verify compliance or submit a notice of intent as outlined in Section 3.1 together with a compliance schedule. Compliance must be achieved as expeditiously as practicable but no later than December 31, 1982 or such later date as may be specified by Congress or EPA under the Clean Air Act.

b. Within 180 days after the effective date of Sections 4.9.1.c, 4.9.3.f, 4.9.6, 4.9.7 and 4.9.8, the owner or operator of an existing installation which is required to comply with the provisions of any of these sections must verify compliance or submit a notice of intent as outlined in Section 3.1 together with a compliance schedule. Compliance must be achieved as expeditiously as practicable but no later than December 31, 1983 or such later date as may be specified by Congress or EPA under the Clean Air Act.

4.10 Abrasive Blasting. 11/79

4.10.1 Visible Emission Standards.

a. No person shall, if he complies with performance standards outlined in Section 4.10.3 or if he is not located in an area of nonattainment for particulates, discharge into the atmosphere from any abrasive blasting any air contaminant for a period or periods aggregating more than three minutes in any one hour which is a shade or density darker than 40% opacity.

b. No person shall, if he is not complying with an applicable performance standard in Section 4.10.3 and is in an area of nonattainment, discharge into the atmosphere from any abrasive blasting any air contaminant for a period or periods aggregating more than three minutes in any one hour which is of a shade or density no darker than 20% opacity.

4.10.2 Visible Emission Evaluation Techniques. Visible emission evaluation of abrasive blasting operations shall be conducted in accordance with the following provisions:

a. Emissions from unconfined blasting shall be read at the densest point of the emission after a major portion of the spent abrasive has fallen out, at a point not less than five feet nor more than twenty-five feet from the impact surface from any single abrasive blasting nozzle.

b. Emissions from unconfined blasting employing multiple nozzles shall be judged as a single source unless it can be demonstrated by the owner or operator that each nozzle, evaluated separately, meets the emission and performance standards provided for in this Section 4.10.

c. Emissions from confined blasting shall be read at the densest point after the air contaminant leaves the enclosure.

4.10.3 Performance Standards.

a. To satisfy the requirements of Section 4.10.1, any abrasive blasting operation may use at least one of the following performance standards:

(1) Confined blasting;

(2) Wet abrasive blasting;

(3) Hydroblasting; or

(4) Unconfined blasting using abrasives as defined in Section 4.10.3.b.

b. Abrasives. Abrasives used for dry unconfined blasting referenced in paragraph 4.10.3.a shall comply with the following performance standards:

(1) Before blasting the abrasive shall not contain more than 1% by weight material passing a #70 U.S. Standard sieve.

(2) After blasting the abrasive shall not contain more than 1.8% by weight material 5 micron or smaller.

Abrasives reused for dry unconfined blasting are exempt from b(2), but must conform with b(1).

c. Abrasive Certification. Sources using the performance standard of Section 4.10.3.a(4) to meet the requirements of Section 4.10.1 must demonstrate they have obtained abrasives from persons which have certified (submitted test results) to the Executive Secretary at least annually that such abrasives meet the requirements of Section 4.10.3.b.

UTAH STATE DIVISION OF HEALTH

AIR CONSERVATION REGULATIONS

PART V

EMERGENCY CONTROLS* (Adopted by the Committee and Board after public hearing)[1]

5.1 Air Pollution Emergency Episodes (Effective date 1/23/72)

5.1.1 Determination of an episode and its extent or stage shall be made by the Executive Secretary taking into consideration the following levels of pollutant concentrations:

| | Ambient Pollutant Concentration | | | |
|---|---|---|---|---|
| Pollutant | Time | Stage I | Stage II | Never to be Exceeded[1] |
| Particulate ($ug/m^3$)[2] | 24 hours | 500 | 800 | 1000 |
| Particulate (COH units)[3] | 24 hours | | | 8 |
| Sulfur Oxides (ppm)[4] | 24 hours | 0.5 | 0.8 | 1.0 |
| Product of Particulate and Sulfur Oxide, both in $ug/m^3$ | 24 hours | 300,000 | 450,000 | 490,000 |
| Product of Particulate expressed in COH units and Sulfur Oxide expressed in ppm | | | | 1.5 |
| Carbon Monoxide (ppm) | 1 hour | 80 | | 125 |
| | 4 hours | | | 75 |
| | 8 hours | 30 | 40 | 50 |
| Nitrogen dioxide (ppm) | 1 hour | 1.0 | 1.4** | 2.0 |
| | 24 hours | 0.3 | 0.4 | 0.5 |
| Oxidants (ppm) | 1 hour | 0.3 | 0.5** | 0.7 |
| | 2 hours | | | 0.6 |
| | 4 hours | | | 0.4 |
| | 24 hours | 0.1 | 0.2 | |

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[1] The levels listed under "Stage I" and Stage II" are values set by the State; the values under the "Never to be Exceeded" column are Federal requirements applicable throughout the United States.

[2] $ug/m^3$ is micrograms per cubic meter

[3] OCH unit is a measure of the light obscuring capability of sampled air.

[4] ppm is parts per million.

* A more detailed description of the Emergency Episode procedures is contained in the Utah Implementation Plan.

** These Standards were inserted as an interpretation and submitted on May 18, 1972.

5.1.2 The Executive Secretary shall also take into consideration, to determine an episode and its extent, rate of change of concentration, meteorological forecasts, and the geographical area of the episode, including a consideration of point and area sources of emission, where applicable.

5.1.3. If an episode is determined to exist, the Director, with concurrence of the Governor shall:

(a) Make public announcements pertaining to the existence, extent and area of the episode.

(b) Require corrective measures as necessary to prevent a further deterioration of air quality.

5.1.4 Episode termination shall be announced by the Director, with concurrence of the Governor, once monitored pollutant concentration data and meteorological forecasts determine the crisis is over.

# APPENDIX A

## National Ambient Air Standards*

### A. Particulate

1. National Primary Ambient Air Standard for Particulate - 75 micrograms per cubic meter of air, annual geometric mean; and 260 micrograms per cubic meter of air, maximum 24-hour concentration not to be exceeced more than once per year.

2. National Secondary Ambient Air Standard for Particulate - 60 micrograms per cubic meter of air, annual geometric mean, as a guide to be used in assessing implementation plans to achieve the 24-hour standard; and 150 micrograms per cubic meter, maximum 24-hour concentration not to be exceeded more than once per year.

### B. Sulfur Oxides

1. National Primary Ambient Air Standard for Sulfur Oxides (sulfur dioxide) - The national primary ambient air quality standards for sulfur oxides, measured as sulfur dioxide by the reference methods described in 40 CRF, Part 50, Appendix A, or by an equivalent method, are:

(a) 80 micrograms per cubic meter (0.03 ppm) - annual arithmetic mean.

(b) 365 micrograms per cubic meter (0.14 ppm) - maximum 24-hour concentration not to be exceeded more than once per year.

2. National Secondary Ambient Air Quality Standard for Sulfur Oxides (sulfur dioxide) - The national secondary ambient air quality standard for sulfur oxides, measured as sulfur dioxide by the reference method described in 40 CFR, Part 50, Appendix A, or by an equivalent method, is 1,300 micrograms per cubic meter (.50 ppm) - maximum 3-hr concentration not to be exceeded more than once per year.

### C. Carbon Monoxide

1. National Primary and Secondary Ambient Air Standard for Carbon Monoxide - 9 ppm maximum 8-hour concentration not to be exceeded more than once per year; and 35 ppm maximum 1-hour concentration not to be exceeded more than once per year.

### D. Photochemical Oxidants

1. National Primary and Secondary Ambient Air Standard for Photochemical Oxidants - 0.08 ppm maximum 1-hour concentration not to be exceeded more than once per year.

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* National Ambient Air Standards are found in Title 40, Code of Federal Regulations, Part 50. Measurement of concentrations are by methods stated in above publication and are to be corrected to a reference temperature of 25°C and a reference pressure of 760 millimeters of mercury. These standards are subject to change. This listing is current as of October 1978.

E. Hydrocarbons

1. National Primary and Secondary Ambient Air Standard for Hydrocarbons - The hydrocarbon standard is for use as a guide in devising implementation plans to achieve oxidant standards and is .24 ppm maximum 3-hour concentration (6 to 9 A.M.) not to be exceeded more than once per year.

F. Nitrogen Dioxide

1. National Primary and Secondary Ambient Air Standard for Nitrogen Dioxide - 0.05 ppm annual arithmetic mean.

## National Standards of Performance for New Stationary Sources*

| Source category | Affected facility | Pollutant | Emission level | Monitoring requirement |
|---|---|---|---|---|
| **Subpart D - Fossil-fuel Fired Steam Generators** | | | | |
| Proposed/effective 8/17/71 (36 FR 15704) | Coal, coal/wood residue fired boilers >250 million Btu/hr | Particulate<br>Opacity<br>$SO_2$<br>$NO_x$ | 0.10 lb/$10^6$ Btu<br>20%; 27% 6 min/hr<br>1.2 lb/$10^6$ Btu<br>0.6 lb/$10^6$ Btu (lignite)<br>0.8 lb/$10^6$ Btu (No. central lignite) | No requirement<br>Continuous<br>Continuous*<br>Continuous* |
| Promulgated 12/23/71 (36 FR 24876) | | | | |
| Revised 7/16/73 (37 FR 14877)<br>10/15/73 (38 FR 28564)<br>6/14/74 (39 FR 20790)<br>1/16/75 (40 FR 2803)<br>10/6/75 (40 FR 46250)<br>12/22/75 (40 FR 59204)<br>11/22/76 (41 FR 51397)<br>1/31/77 (42 FR 5936)<br>7/25/77 (42 FR 37936)<br>8/15/77 (42 FR 41122)<br>8/17/77 (42 FR 41122) | Oil, oil/wood residue fired boilers >250 million Bt/hr | Particulate<br>Opacity<br>$SO_2$<br>$NO_x$ | 0.10 lb/$10^6$ Btu<br>20%, 27% 6 min/hr<br>0.80 lb/$10^6$ Btu<br>0.30 lb/$10^6$ Btu | No requirement<br>Continuous<br>Continuous*<br>Continuous* |
| | Gas, gas/wood residue fired boilers >250 million Btu/hr | Particulate<br>Opacity<br>$NO_x$ | 0.10 lb/$10^6$ Btu<br>20%; 27% 6 min/hr<br>0.20 lb/$10^6$ Btu | No requirement<br>Continuous*<br>Continuous* |
| | Mixed fossil fuel fired boilers >250 million Btu/hr | Particulate<br>Opacity<br>$SO_2$<br>$NO_x$ (except lignite or 25% coal refuse) | 0.10 lb/$10^6$ Btu<br>20%; 27% 6 min/hr<br>Prorated<br>Prorated | No requirement<br>Continuous<br>Continuous*<br>Continuous*<br>*exceptions; see standards |
| **Subpart E - Incinerators** | | | | |
| Proposed/effective 8/17/71 (36 FR 15704) | Incinerators >50 tons/day | Particulate | 0.08 gr/dscf corrected to 12% $CO_2$ | No requirement<br>Daily charging rates and hours of operation |
| Promulgated 12/23/71 (36 FR 24876) | | | | |
| Revised 6/14/74 (36 FR 20790)<br>7/25/77 (42 FR 37936)<br>8/17/77 (42 FR 41424) | | | | |

*National Standards of Performance for New Stationary Sources are found in Title 40 Code of Federal Regulations Part 60.

Note: These Federal Regulations are subject to change. This listing was current as of October 1978.

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## STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES (Continued)

| Source category | Affected facility | Pollutant | Emission level | Monitoring requirement |
|---|---|---|---|---|
| **Subpart F - Portland Cement Plants** | | | | |
| Proposed/effective 8/17/71 (36 FR 15704) | Kiln | Particulate<br>Opacity | 0.30 lb/ton<br>20% | No requirement<br>No requirement |
| Promulgated 12/23/71 (36 FR 24876) | Clinker cooler | Particulate<br>Opacity | 0.10 lb/ton<br>10% | No requirement<br>No requirement |
| Revised 6/14/74 (39 FR 20790)<br>11/12/74 (39 FR 39874)<br>10/6/75 (40 FR 46250)<br>7/25/77 (42 FR 37936)<br>8/17/77 (42 FR 41624) | Fugitive emission points | Opacity | 10% | No requirement<br>Daily production and feed kiln rates |
| **Subpart G - Nitric Acid Plants** | | | | |
| Proposed/effective 8/17/71 (36 FR 15704) | Process equipment | Opacity<br>$NO_x$ | 10%<br>3.0 lb/ton | No requirement<br>Continuous |
| Promulgated 12/23/71 (36 FR 24876) | | | | |
| Revised 5/23/73 (38 FR 13562)<br>10/15/73 (38 FR 28564)<br>6/14/74 (39 FR 20790)<br>10/6/75 (40 FR 46250)<br>7/25/77 (42 FR 37936)<br>8/17/77 (42 FR 41624). | | | | Daily production rates and hours |

## STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES (Continued)

| Source category | Affected facility | Pollutant | Emission level | Monitoring requirement |
|---|---|---|---|---|
| **Subpart H - Sulfuric Acid Plants** | | | | |
| Proposed/effective 8/11/71 (36 FR 15704) | Process equipment | $SO_2$ | 4.0 lb/ton | Continuous |
| | | Acid mist | 0.15 lb/ton | No requirement |
| | | Opacity | 10% | No requirement |
| Promulgated 12/23/71 (36 FR 24876) | | | | |
| Revised 5/23/73 (38 FR 13562) 10/15/73 (38 FR 28564) 6/14/74 (39 FR 20790) 10/6/75 (40 FR 46250) 7/25/77 (42 FR 37936) 8/17/77 (42 FR 41424) | | | | |
| **Subpart I - Asphalt Concrete Plants** | | | | |
| Proposed/effective 6/11/73 (38 FR 15406) | Dryers; screening and weighing systems; storage, transfer, and loading systems; and dust handling equipment | Particulate | 0.04 gr/dscf (90 mg/dscm) | No requirement |
| | | Opacity | 20% | No requirement |
| Promulgated 3/8/74 (39 FR 9308) | | | | |
| Revised 10/6/75 (40 FR 46250) 7/25/77 (42 FR 37936) 8/17/77 (42 FR 41424) | | | | |
| **Subpart J - Petroleum Refineries** | | | | |
| Proposed/effective 6/11/73 (38 FR 15406) | Catalytic cracker | Particulate | 1.0 lb/1000 lb | No requirement |
| | | Opacity | 30% (6 min. exemption) | Continuous |
| Promulgated 3/8/74 (39 FR 9308) | | CO | 0.05% | |
| Revised 10/6/75 (40 FR 46250) 6/24/77 (42 FR 32426) 7/25/77 (42 FR 37936) 8/4/77 (42 FR 39309) 8/17/77 (42 FR 41424) | Fuel gas combustion | $SO_2$ | 0.1 gr $H_2S$/dscf (230 mg/dscm) fuel gas content | Continuous |

## STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES (Continued)

| Source category | Affected facility | Pollutant | Emission level | Monitoring requirement |
|---|---|---|---|---|
| Subpart K - Storage Vessels for Petroleum Liquids<br><br>Proposed/effective<br>6/11/73 (38 FR 15406)<br>Promulgated<br>3/8/74 (39 FR 9308)<br><br>Revised<br>3/11/74 (39 FR 13776)<br>6/14/74 (39 FR 20790)<br>7/25/77 (42 FR 37936)<br>8/17/77 (42 FR 41424) | Storage tanks >40,000 gal. capacity | Hydrocarbons | For vapor pressure 78-570 mm Hg, equip with floating roof, vapor recovery system, or equivalent; for vapor pressure >570 mm Hg, equip with vapor recovery system or equivalent | No requirement<br><br>Date, type, vapor pressure and temperature |
| Subpart L - Secondary Lead Smelters<br><br>Proposed/effective<br>6/11/73 (38 FR 15406)<br><br>Promulgated<br>3/8/74 (39 FR 9308)<br><br>Revised<br>3/11/74 (39 FR 13776)<br>10/6/75 (40 FR 46250)<br>7/25/77 (42 FR 37936)<br>8/17/77 (42 FR 41424) | Reverberatory and blast furnaces<br><br>Pot furnaces >550 lb/capacity | Particulate<br><br>Opacity<br><br>Opacity | 0.022 gr/dscf (50. mg/dscm)<br>20%<br><br>10% | No requirement<br><br>No requirement<br><br>No requirement |
| Subpart M - Secondary Brass, Bronze and Ingot Production Plants<br><br>Proposed/effective<br>6/11/73 (38 FR 15406)<br><br>Promulgated<br>3/8/74 (39 FR 9308)<br><br>Revised<br>10/6/75 (40 FR 46250)<br>7/25/77 (42 FR 37936)<br>8/17/77 (42 FR 41424) | Reverberatory furnace<br><br>Blast and electric furnaces >550 lb/capacity | Particulate.<br><br>Opacity<br><br>Opacity | 0.022 gr/dscf (50 mg/dscm)<br>20%<br><br>10% | No requirement<br><br>No requirement<br><br>No requirement |



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## STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES (Continued)

| Source category | Affected facility | Pollutant | Emission level | Monitoring requirement |
|---|---|---|---|---|
| **Subpart N - Iron and Steel Plants**<br><br>Proposed/effective<br>6/11/73 (38 FR 15406)<br><br>Promulgated<br>3/8/74 (39 FR 9308)<br><br>Revised<br>7/25/77 (42 FR 37936)<br>8/17/77 (42 FR 41424) | Basic oxygen process furnace | Particulate<br><br>Opacity | 0.022 gr/dscf (50 mg/dscm)<br><br>10% (20% once per cycle) | No requirement<br><br>No requirement |
| **Subpart O - Sewage Treatment Plants**<br><br>Proposed/effective<br>6/11/73 (38 FR 15406)<br><br>Promulgated<br>3/8/74 (39 FR 9308)<br><br>Revised<br>4/17/74 (39 FR 13776)<br>5/3/74 (39 FR 15396)<br>10/6/75 (40 FR 46250)<br>7/25/77 (42 FR 37936)<br>8/17/77 (42 FR 41424) | Sludge incinerators | Particulate<br>Opacity | 1.30 lb/ton dry sludge<br>20% | No requirement<br>No requirement<br><br>Mass or volume of sludge |
| **Subpart P - Primary Copper Smelters**<br><br>Proposed effective<br>10/16/74 (39 FR 37040)<br><br>Promulgated<br>1/15/76 (41 FR 2331)<br><br>Revised<br>2/26/76 (41 FR 8346)<br>7/25/77 (42 FR 37936)<br>8/17/77 (42 FR 41424) | Dryer<br><br>Roaster, smelting furnace,* copper converter<br><br>*Reverberatory furnaces that process high-impurity feed materials are exempt from $SO_2$ standard | Particulate<br><br>Opacity<br><br>$SO_2$<br>Opacity | 0.022 gr/dscf<br>50 mg/dscm)<br>20%<br><br>0.065% by Volume<br>20% | No requirement<br><br>Continuous<br><br>Continuous<br>No requirement<br><br>Monthly record of charge and weight percent of arsenic, antimony, lead, and zinc |

## STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES (Continued)

| Source category | Affected facility | Pollutant | Emission level | Monitoring requirement |
|---|---|---|---|---|
| **Subpart Q - Primary Zinc Smelters** | | | | |
| Proposed/effective 10/16/74 (39 FR 37040) | Sintering machine | Particulate | 0.022 gr/dscf (50 mg/dscm) | No requirement |
| | | Opacity | 20% | Continuous |
| Promulgated 1/15/76 (41 FR 2331) | Roaster | $SO_2$ | 0.065% by Volume | Continuous |
| | | Opacity | 20% | Continuous |
| Revised 7/25/77 (42 FR 37936) 8/11/77 (42 FR 41424) | | | | |
| **Subpart R - Primary Lead Smelters** | | | | |
| Proposed/effective 10/16/74 (39 FR 37040) | Blast or reverberatory furnace, sintering machine discharge end | Particulate | 0.022 gr/dscf (50 mg/dscm) | No requirement |
| | | Opacity | 2uf | Continuous |
| Promulgated 1/15/76 (41 FR 2331) | Sintering machine, electric smelting furnace, converter | $SO_2$ | 0.065% by Volume | Continuous |
| | | Opacity | 20% | No requirement |
| Revised 7/25/77 (42 FR 37936) 8/11/77 (42 FR 41424) | | | | |
| **Subpart S - Primary Aluminum Reduction Plants** | | | | |
| Proposed/effective 10/23/74 (39 FR 37730) | Potroom group | (a) Total fluorides | 2.0 lb/ton | No requirement |
| | (a) Soderberg plant | Opacity | 10% | No requirement |
| | (b) Prebake plant | (b) Total fluorides | 1.9 lb/ton | No requirement |
| Promulgated 1/26/76 (41 FR 3825) | | Opacity | 10% | No requirement |
| | Anode bake plants | Total fluorides | 0.1 lb/ton | No requirement |
| Revised 7/25/77 (42 FR 37936) 8/11/77 (42 FR 41424) | | Opacity | 20% | No requirement |
| | | | | Daily weight, production rate of aluminum and anode raw material feed rate, cell or potline voltages |

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## STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES (Continued)

| Source category | Affected facility | Pollutant | Emission level | Monitoring requirement |
|---|---|---|---|---|
| Subpart T - Phosphate Fertilizer Industry<br><br>Proposed/effective 10/22/74 (39 FR 37602)<br><br>Promulgated 8/6/75 (40 FR 33152)<br><br>Revised<br><br>7/25/77 (42 FR 37936)<br>8/17/77 (42 FR 41424) | Wet process phosphoric acid | Total fluorides | 0.02 lb/ton | No requirement<br><br>Mass flow rate, daily equivalent $P_2O_5$ feed, total pressure drop across scrubbing system |
| Subpart U - Phosphate Fertilizer Industry<br><br>Proposed/effective 10/22/74 (39 FR 37602)<br><br>Promulgated 8/6/75 (40 FR 33152)<br><br>Revised 7/25/77 (42 FR 37936)<br>8/17/77 (42 FR 41424) | Superphosphoric acid | Total fluorides | 0.01 lb/ton | No requirement<br><br>Mass flow rate, daily equivalent $P_2O_5$ feed, total pressure drop across scrubbing system |
| Subpart V - Phosphate Fertilizer Industry<br><br>Proposed/effective 10/22/74 (39 FR 37602)<br><br>Promulgated 8/6/75 (40 FR 33152)<br><br>Revised 7/25/77 (42 FR 37936)<br>8/17/77 (42 FR 41424) | Diammonium phosphate | Total fluorides | 0.06 lb/ton | No requirement<br><br>Mass flow rate, daily equivalent $P_2O_5$ feed, total pressure drop across scrubbing system |

## STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES (Continued)

| Source category | Affected facility | Pollutant | Emission level | Monitoring requirement |
|---|---|---|---|---|
| Subpart W - Phosphate Fertilizer Industry<br><br>Proposed/effective 10/22/74 (39 FR 37602)<br><br>Promulgat 8/26/75 (40 R 33152)<br><br>Revised 7/25/77 (42 FR 37936) 8/11/77 (42 FR 41424) | Triple superphosphate | Total fluorides | 0.2 lb/ton | No requirement<br><br>Mass flow rate, daily equivalent $P_2O_5$ feed, total pressure drop across scrubbing system |
| Subpart X - Phosphate Fertilizer Industry<br><br>Proposed/effective 10/22/74 (39 FR 37602)<br><br>Promulgated 8/26/75 (40 FR 33152)<br><br>Revised 7/25/77 (42 FR 37936) 8/11/77 (42 FR 41424) | Granular triple superphosphate | Total fluorides | $5.0 \times 10^{-1}$ lb/ton/ton | No requirement<br><br>Mass flow rate, daily equivalent $P_2O_5$ feed, total pressure drop across scrubbing system. |
| Subpart Y - Coal Preparation Plants<br><br>Proposed/effective 10/24/74 (39 FR 37922)<br><br>Promulgated 1/15/76 (41 FR 2232)<br><br>Revised 7/25/77 (42 FR 37936) 8/11/77 (42 FR 41424) 9/1/77 (42 FR 44812) | Thermal dryer | Particulate | 0.031 gr/dscf (0.070 g/dscm) | Temperature, Scrubber pressure loss, Water pressure |
| | | Opacity | 20% | No requirement |
| | Pneumatic coal cleaning equipment | Particulate | 0.018 gr/dscf (0.040 g/dscm) | No requirement. |
| | | Opacity | 10% | No requirement |
| | Processing and conveying equipment, storage systems, transfer and loading systems | Opacity | 20% | No requirement |

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## STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES (Continued)

| Source category | Affected facility | Pollutant | Emission level | Monitoring requirement |
|---|---|---|---|---|
| Subpart Z - Ferroalloy Production Facilities | | | | |
| Proposed/effective 10/21/74 (39 FR 37470) | Electric submerged arc furnaces | Particulate | 0.99 lb/MW-hr (0.45 kg/MW-hr) ("high silicon alloys") 0.51 lb/MW-hr (0.23 kg/MW-hr) (chrome and manganese alloys) | No requirement |
| Promulgated 5/26/76 (41 FR 18497) | | | No visible emissions may escape furnace capture system | Flowrate monitoring in hood |
| Revised 5/28/76 (41 FR 20659) 7/25/77 (42 FR 37936) 8/17/77 (42 FR 41424) | | | No visible emission may escape tapping system for >40% of each tapping period | Flowrate monitoring in hood |
| | | Opacity | 15% | Continuous |
| | | CO | 20% volume basis | No requirement |
| | Dust handling equipment | Opacity | 10% | No requirement |
| Subpart AA - Steel Plants | | | | |
| Proposed/effective 10/21/74 (39 FR 37666) | Electric arc furnaces | Particulate | 0.0052 gr/dscf (12 mg/dscm) | No requirement |
| Promulgated 9/23/75 (40 FR 43850) | | Opacity (a) control device (b) shop roof | 3% 6% except <20%-charging <40%-tapping | Continuous flowrate monitoring in capture hood, Pressure monitoring in DSE system |
| Revised 7/25/77 (40 FR 37936) 8/17/77 (42 FR 41424) 9/7/77 (42 FR 44812) | | | | |
| | Dust handling equipment | Opacity | 10% | No requirement |

# APPENDIX C

## Prevention of Significant Deterioration of Air Quality Requirements*

A. Areas designated as Class I, Class II or Class III shall be limited to the following maximum allowable increase over the baseline air quality concentrations.

| Pollutant | Class I µg/m³ | Class II µg/m³ | Class III µg/m³ |
|---|---|---|---|
| Particulate Matter: | | | |
| Annual geometric mean | 5 | 19 | 37 |
| 24-hour maximum | 10 | 37 | 75 |
| Sulfur Dioxide: | | | |
| Annual arithmetic mean | 2 | 20 | 40 |
| 24-hour maximum | 5 | 91 | 182 |
| 3-hour maximum | 25 | 512 | 700 |

B. Under no circumstances may concentrations of particulate matter and sulfur dioxide in any Class I, Class II or Class III areas be allowed to exceed the National Secondary Ambient Air Quality Standards.

C. The following types of sources are subject to new source review under the National Prevention of Significant Deterioration of Air Quality requirements if constructed or expanded after June 1, 1975:

1. Fossil-Fuel Steam Electric Plants of more than 100 million BTU per hour heat input
2. Coal Cleaning Plants
3. Kraft Paper Mills
4. Portland Cement Plants
5. Primary Zinc Smelters
6. Iron & Steel Mills
7. Primary Aluminum Ore Reduction Plants
8. Primary Copper Smelters
9. Municipal Incinerators capable of charging more than 250 tons of refuse per 24-hour day.

* National Prevention of Significant Deterioration of Air Quality Requirements are found in Title 40, Code of Federal Regulations, Part 52.21(c)(2)(i).

10. Hydrofluroric, Sulfuric and Nitric Plants
11. Petroleum Refineries
12. Lime Plants
13. Phosphate Rock Processing Plants
14. Coke Oven Batteries
15. Sulfur Recovery Plants
16. Carbon Black Plant (furnace process)
17. Primary Lead Smelters
18. Fuel Conversion Plants
19. Sintering Plants
20. Secondary Metal Production Facilities
21. Chemical Process Plants
22. Fossil-Fuel Boiler of more than 250 million BTU per hour heat input
23. Petroleum Storage and Transfer Facilities with a capacity exceeding 300,000 bbl
24. Taconite Ore Processing Facilities
25. Glass fiber Processing Plants
26. Charcoal Production Facilities

# APPENDIX D

## NATIONAL EMISSIONS STANDARDS FOR HAZARDOUS AIR POLLUTANTS

National emission standards have been promulgated for the following hazardous air pollutants:

Asbestos
Beryllium
Beryllium Rocket Motor Firing
Mercury
Vinyl Chloride

40 CFR, Part 61 contains the National Emissions Standards for Hazardous Air Pollutants.

Portions of Part 61 have been included in this appendix for convenience of reference.

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* National Emissions Standards for Hazardous Air Pollutants are found in Title 40 Code of Federal Regulations Part 61. These Federal Regulations are subject to change. This listing is current as of October 1978.